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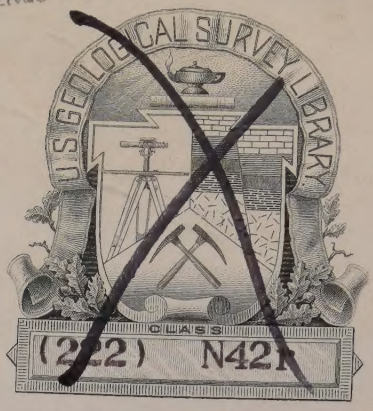

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GEOLOGICAL SURVEY OF NEW JERSEY

HENRY B. KÜMMEL, State Geologist

A REPORT on paleontology
V. 4

ON THE

Cretaceous Paleontology of New Jersey

BY

STUART WELLER

Based upon the Stratigraphic Studies

OF

GEORGE N. KNAPP

U.S. GEOLOGICAL SURVEY
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VOLUME IV OF THE PALEONTOLOGY SERIES

PLATES

TRENTON, N. J.:
MacCrellish & Quigley, State Printers,
1907.

11868

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(All Figures are Natural Size Unless Otherwise Indicated.)

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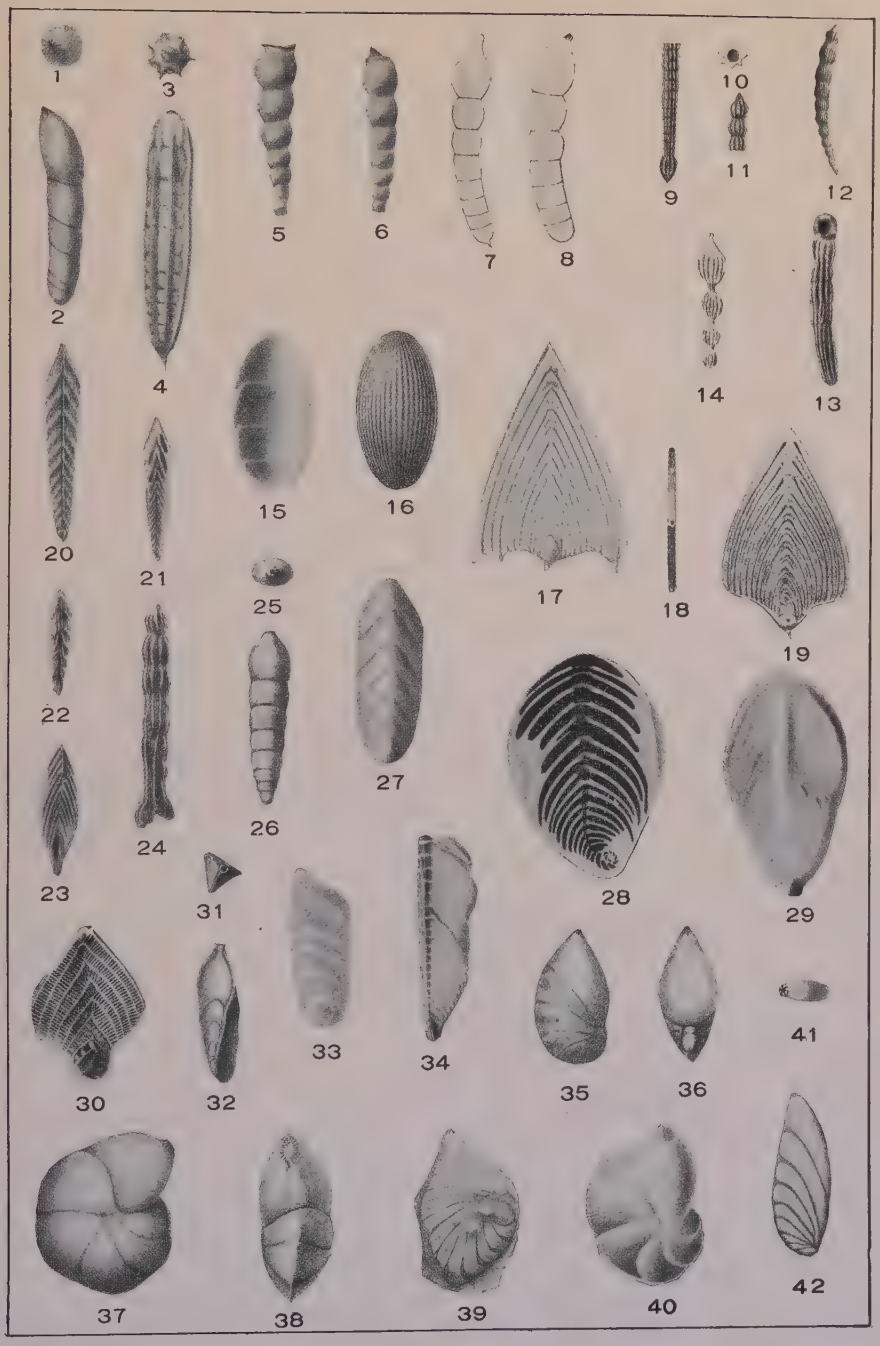

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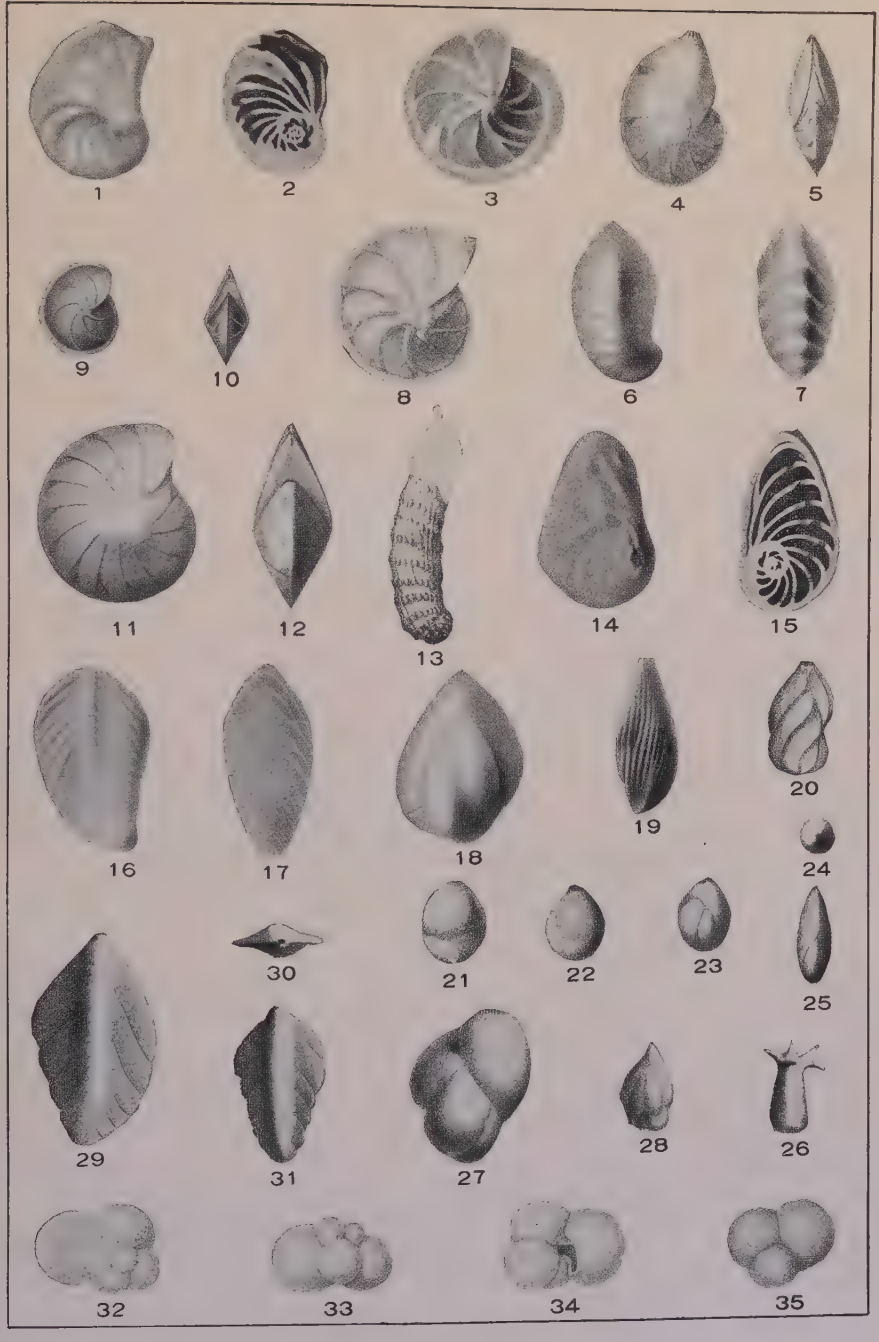

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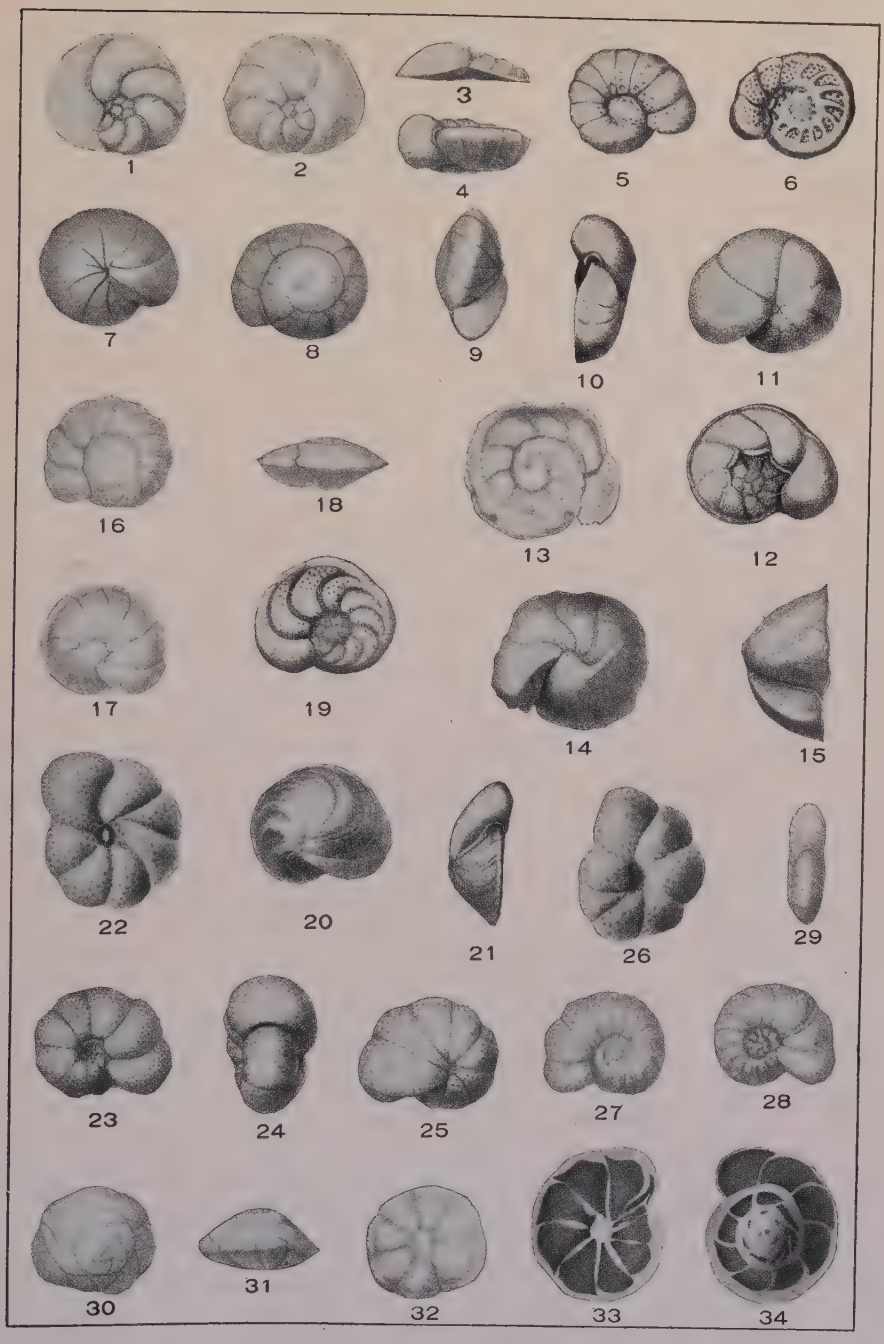
Navesink marl, Freehold.



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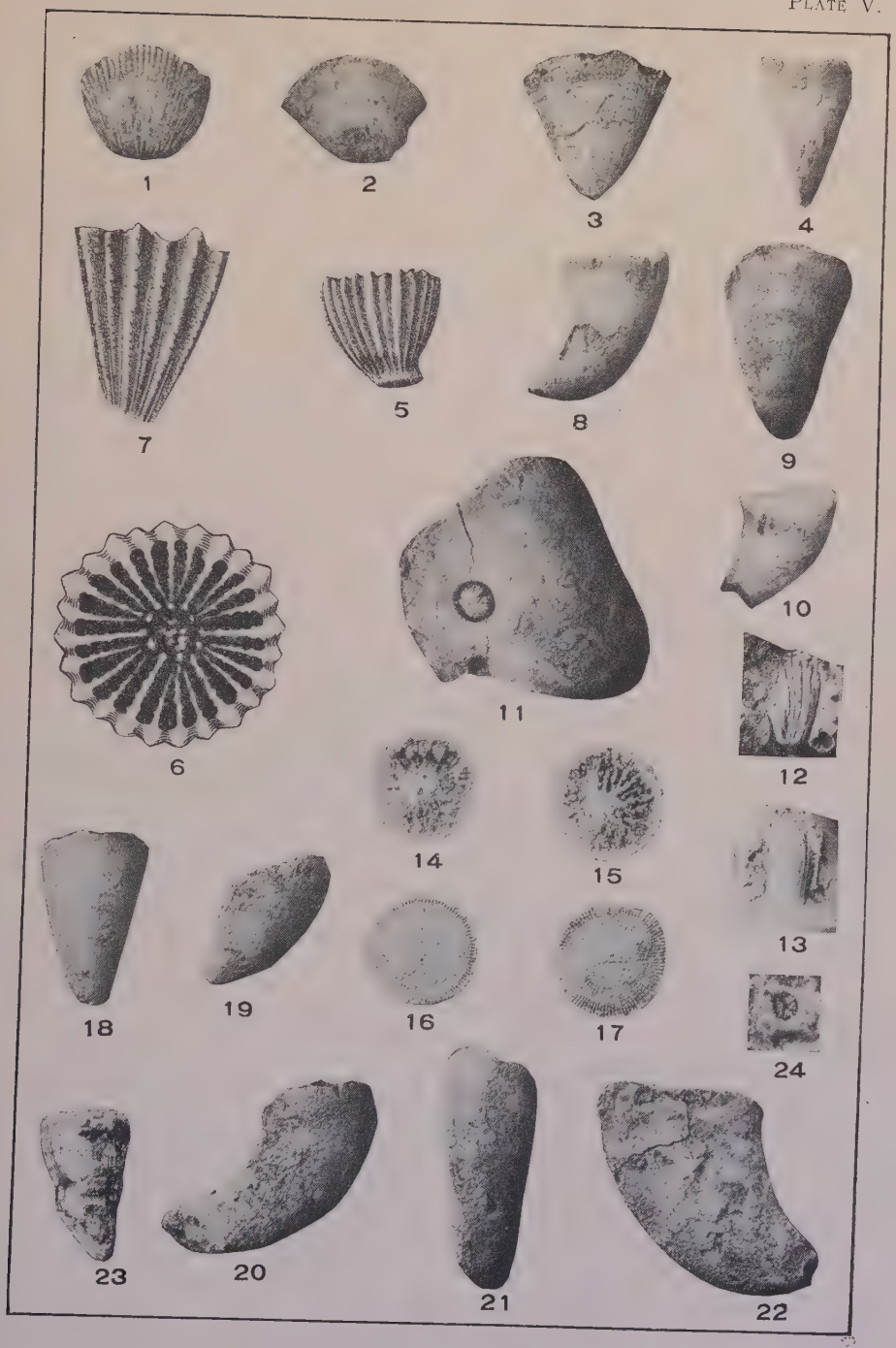

ANTHOZOA.

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Vincentown limesand; Vincentown.

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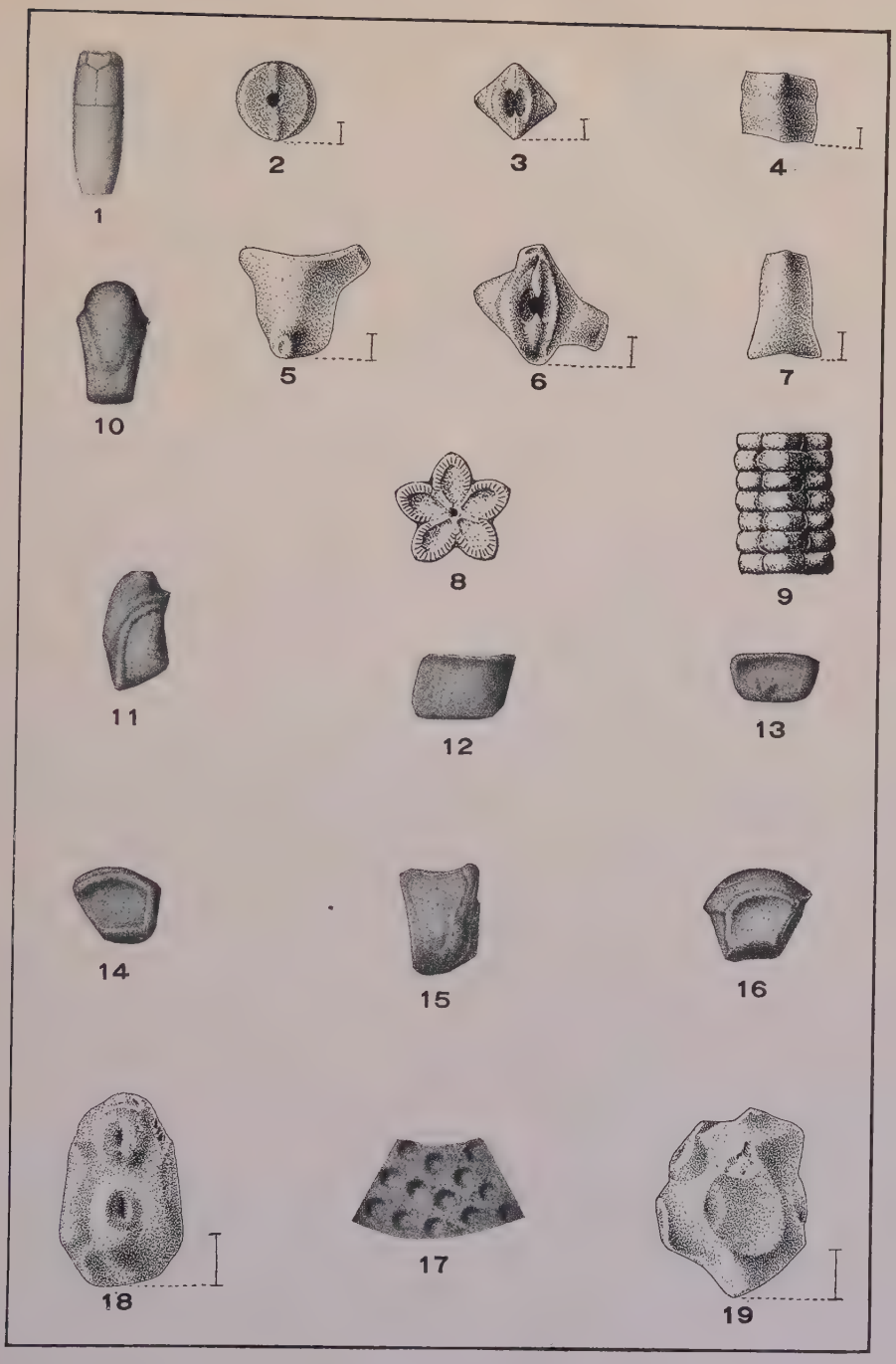
Vincentown limesand; Vincentown.



ECHINODERMATA.

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Vincentown limesand; Vincentown.

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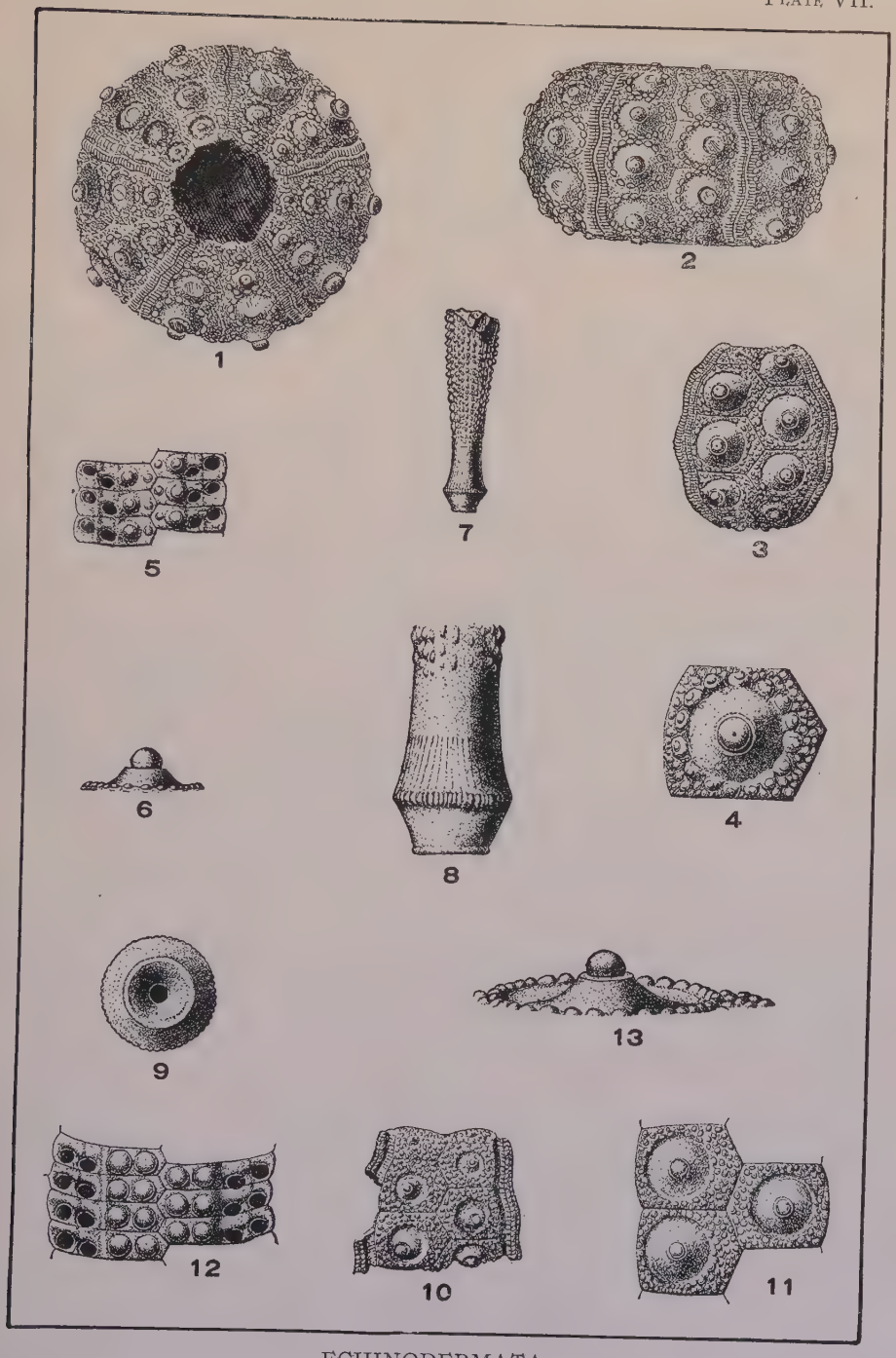
11. Interambulacral plates, enlarged.

12. Ambulacral area, highly magnified.

13. Tubercle enlarged.

Vincentown limesand; Vincentown.



ECHINODERMATA.

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(All figures after Clark.)

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10. Oral opening enlarged.

Vincentown limesand; Vincentown.

SALENIA BELLULA Clark, ... p. 283

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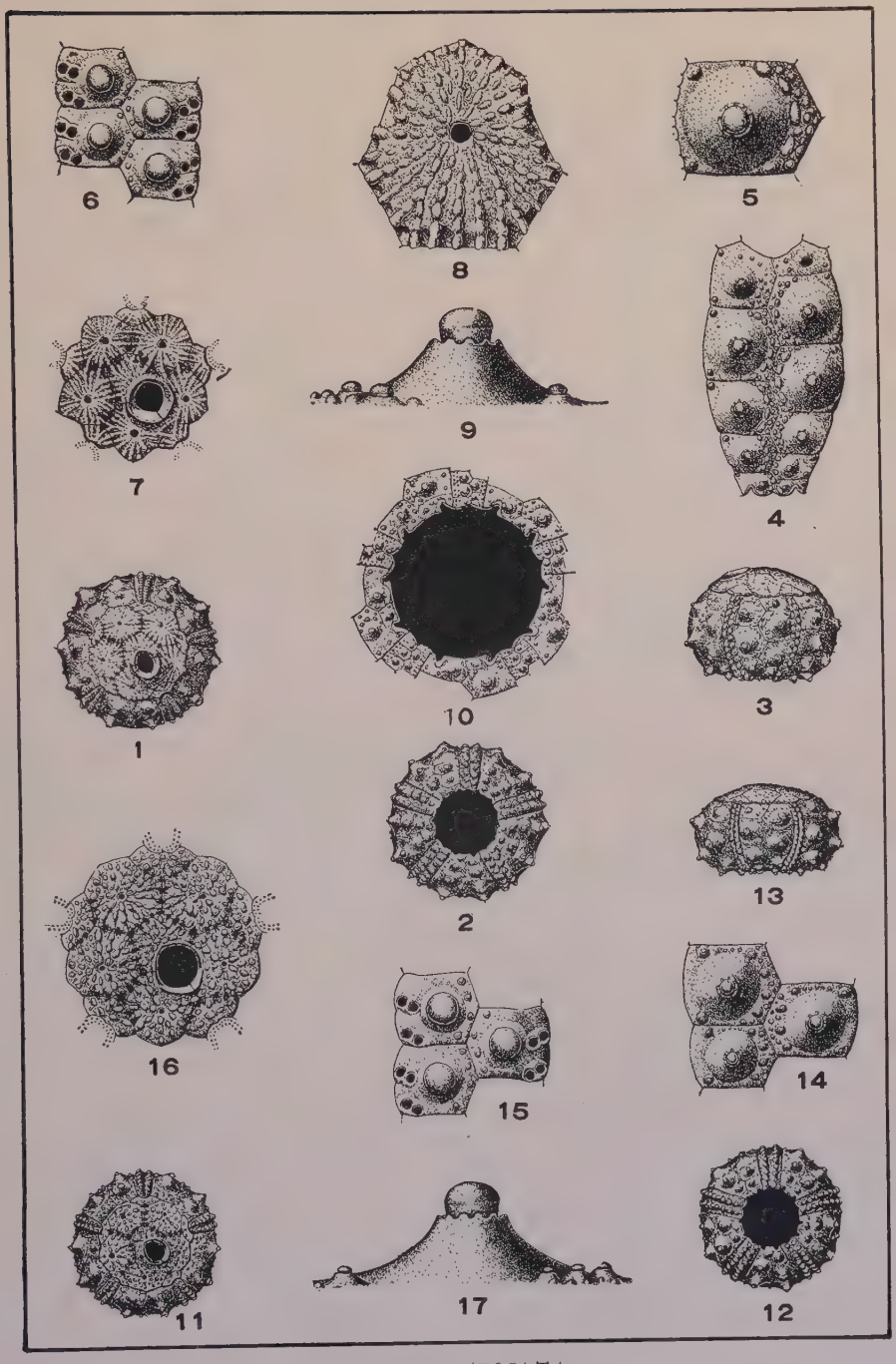
15. Three ambulacral plates, highly magnified.
16. Apical disk, enlarged.
17. Tubercle, highly magnified.

Vincentown limesand; Vincentown.



ECHINODERMATA.

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(All figures after Clark.)

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Vincentown limesand; Vincentown.

PSEUDODIADEMA SPECIOSUM Clark, ... p. 286

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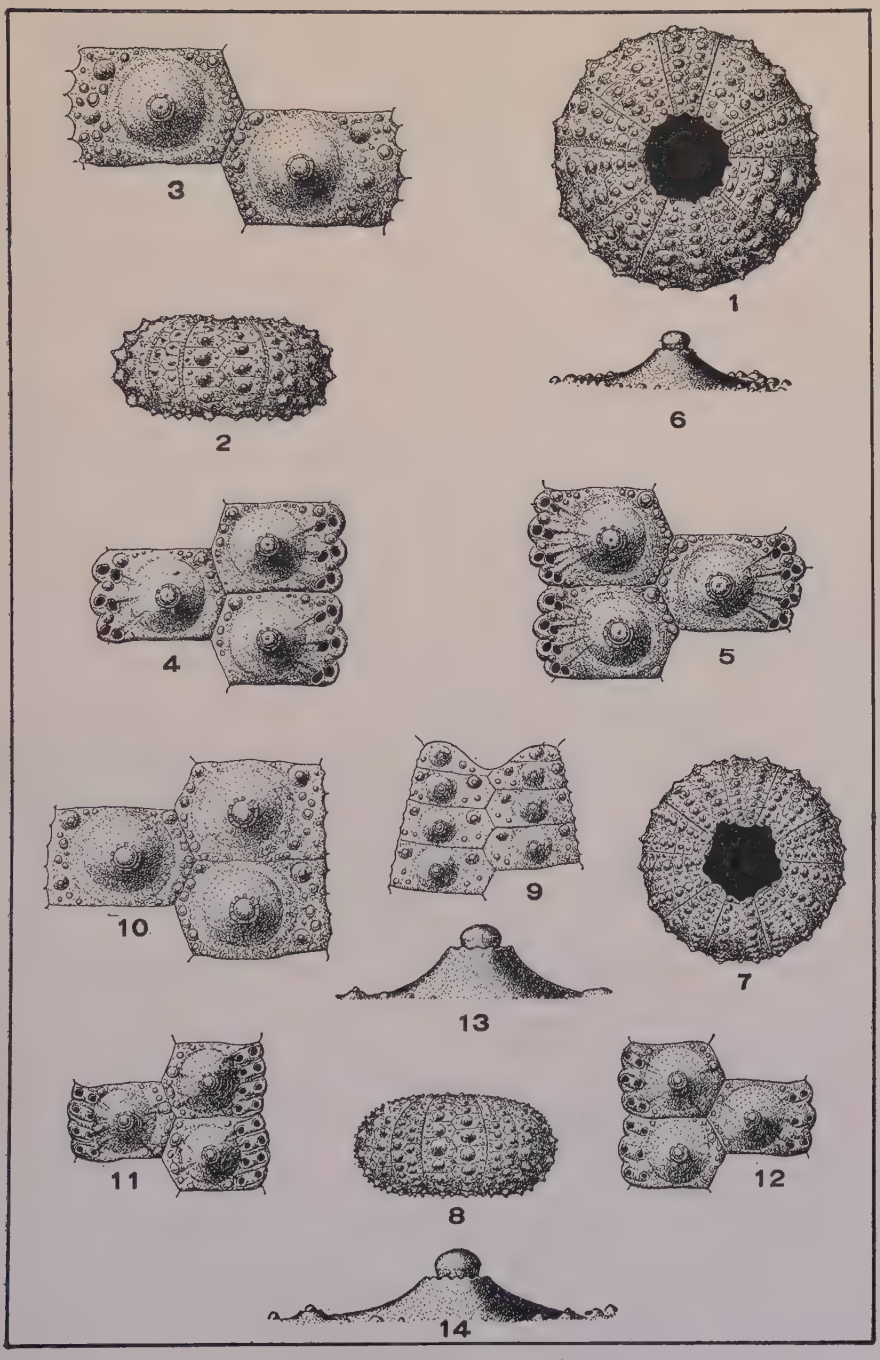
11–12. Portions of the ambulacral area, highly magnified.
13. Tubercle of ambulacral area.
14. Tubercle of interambulacral area.

Vincentown limesand; Vincentown.



ECHINODERMATA.

EXPLANATION OF PLATE X.

(All figures after Clark.)

PSAMMECHINUS CINGULATUS Clark, ...p. 288

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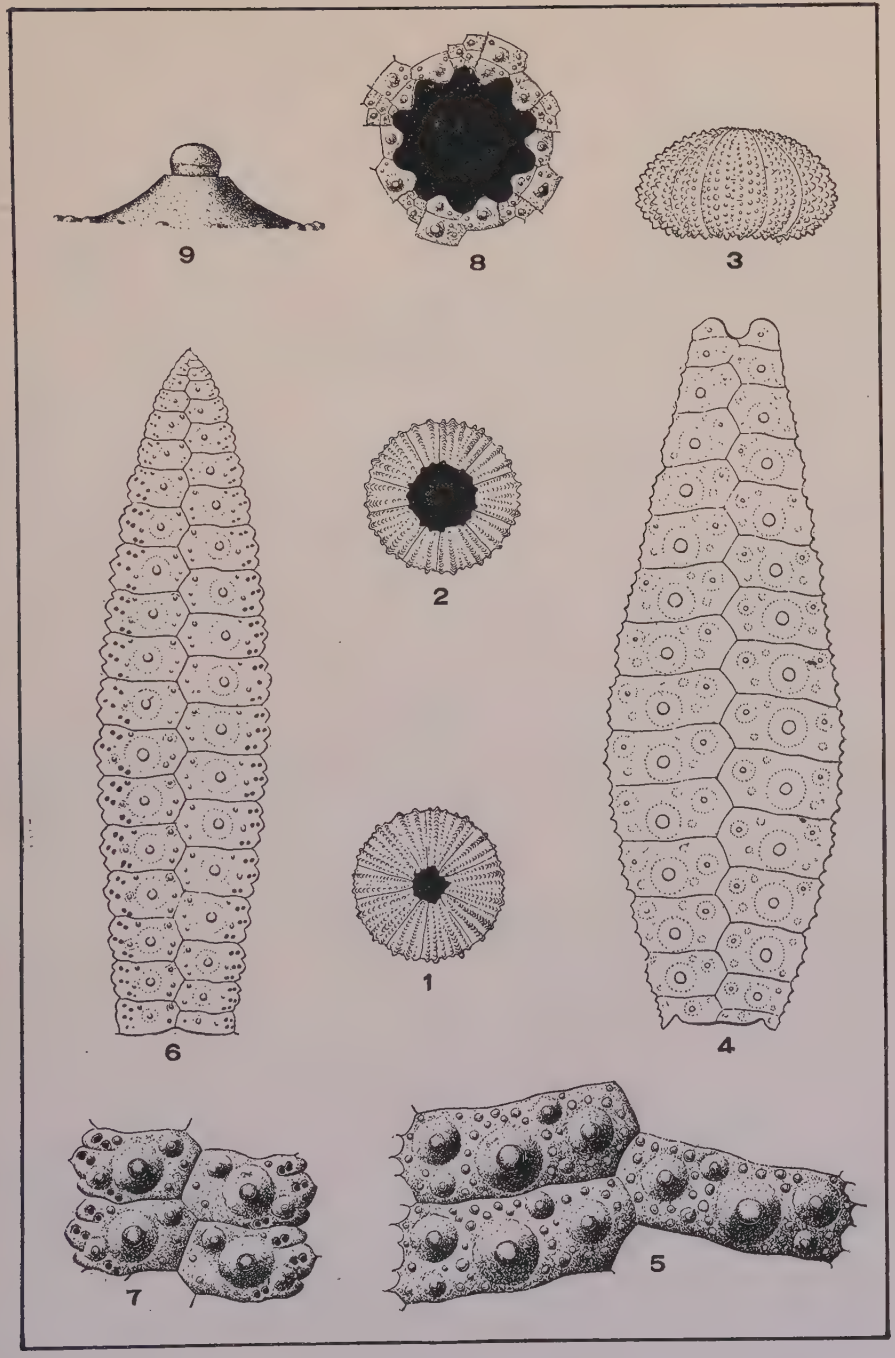
5. Three interambulacral plates highly magnified.
6. Ambulacral area, enlarged.
7. Four ambulacral plates, highly magnified.
8. Oral opening, enlarged.
9. Tubercle, enlarged.

Vincentown limesand.



ECHINODERMATA.

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(All figures after Clark.)

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Vincentown limesand; Timber Creek.

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Vincentown limesand; Timber Creek.

CATOPYGUS PUSILLUS Clark, ...p. 292

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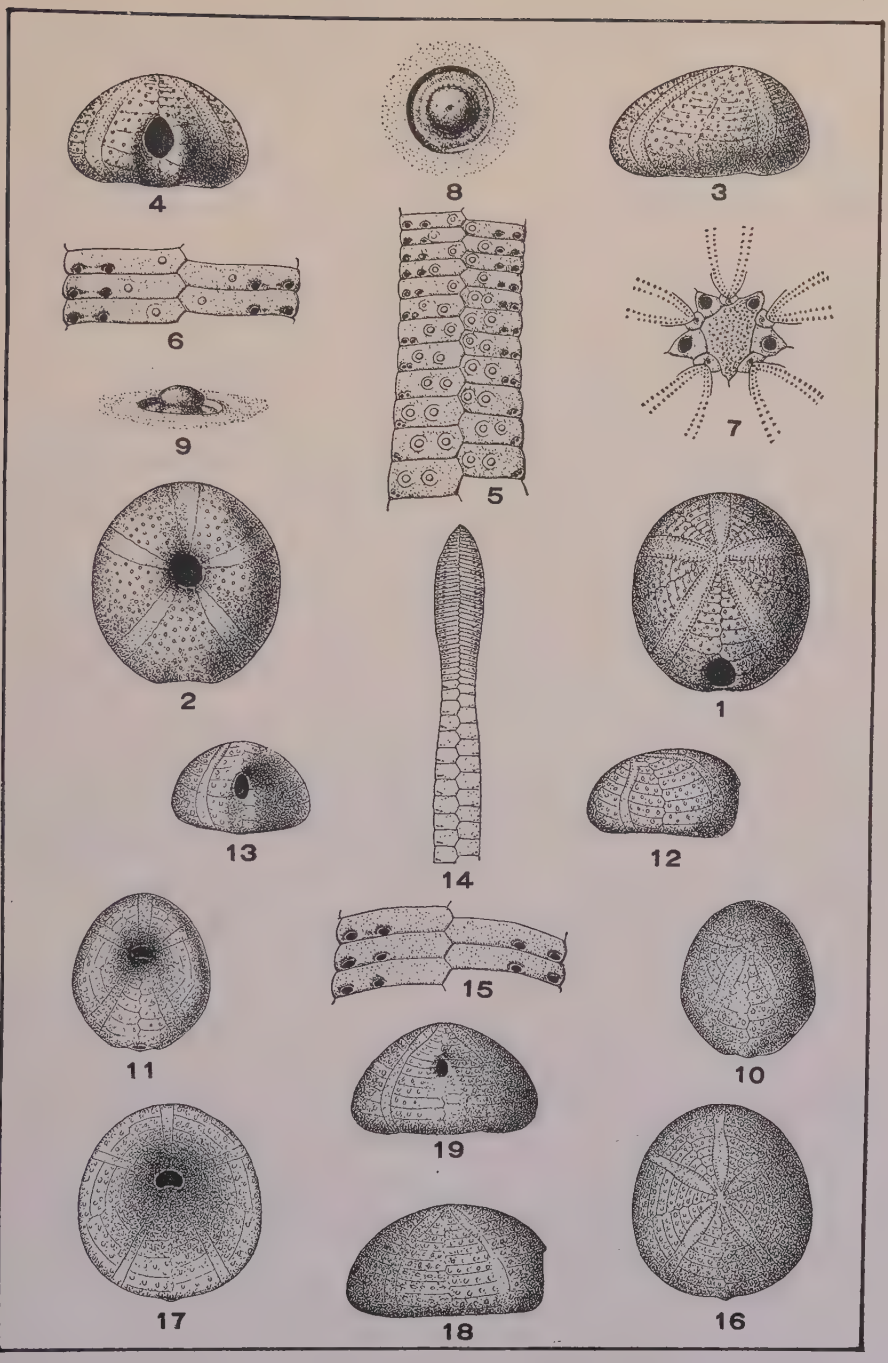
Merchantville clay-marl.



ECHINODERMATA.

EXPLANATION OF PLATE XII.

CATOPYGUS WILLIAMSI Clark n. sp., ... p. 292

(Illustrations contributed by Dr. W. B. Clark.)

1–4. Ventral, dorsal, posterior and lateral views of a complete individual.

Navesink marl; bluff east of Atlantic Highlands.

CASSIDULUS AEQUOREUS Morton, ... p. 293

(All figures after Clark.)

5–8. Posterior, lateral, ventral and dorsal views of the type specimen from Alabama.

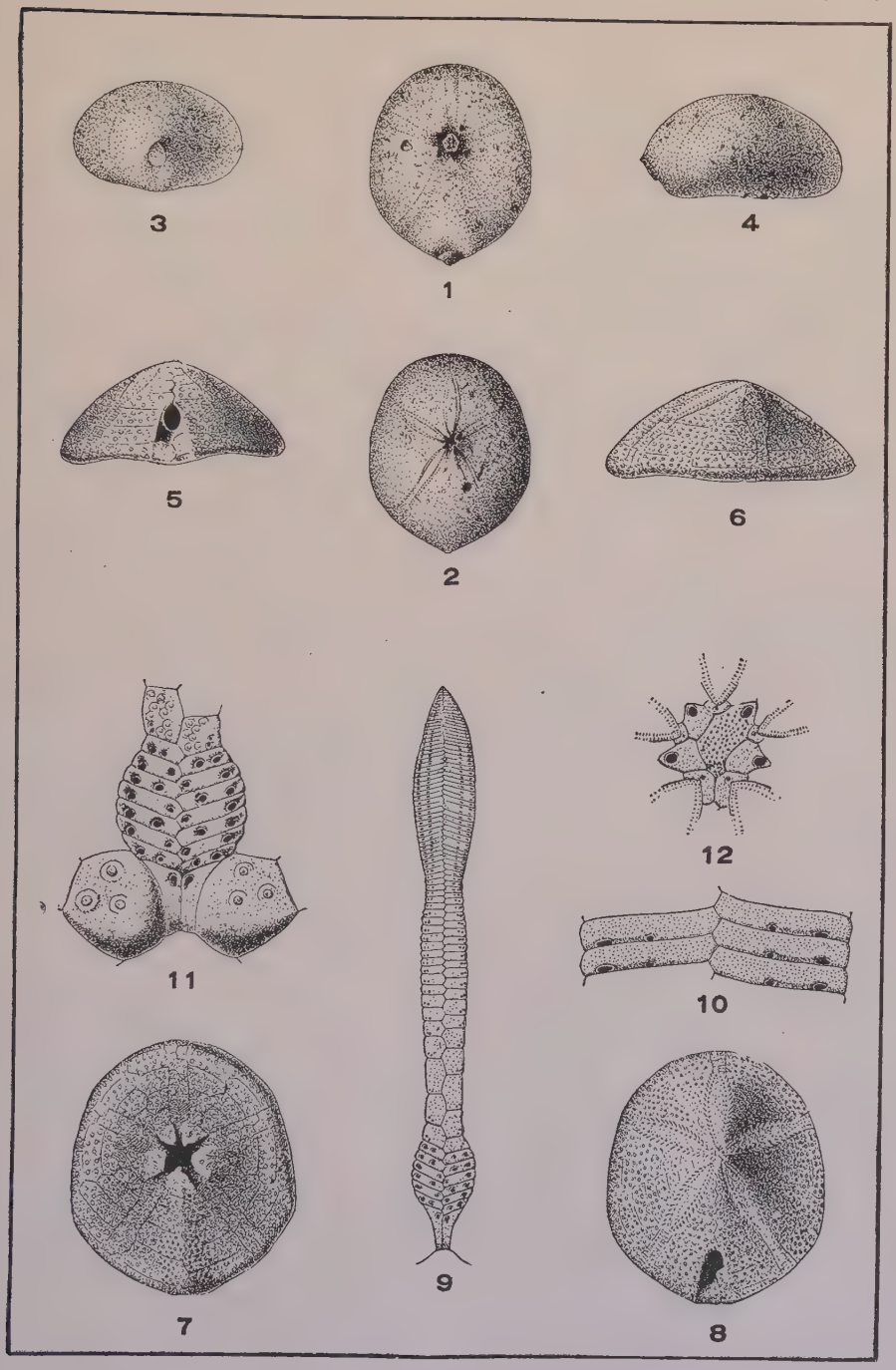
9. Anterior ambulacrum enlarged.

10. Several ambulacral plates from the petaloid region, much enlarged.

11. Several ambulacral plates from the oral region.

12. Apical disk, much enlarged.

Vincentown limesand.



ECHINODERMATA.

EXPLANATION OF PLATE XIII.

(All figures after Clark.)

ANANCHYTES OVALIS Clark, ... p. 295

1–5. Lateral, anterior, ventral, dorsal and posterior views of a complete individual.

6. Apical disk, enlarged.

7. Several ambulacral plates, much enlarged.

8. Several interambulacral plates, much enlarged.

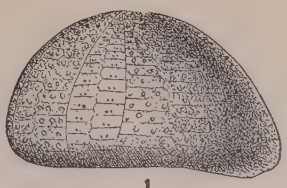
Vincentown limesand; Vincentown.

CARDIASTER SMOCKI Clark n. sp., ... p. 298

(Illustrations contributed by Dr. W. B. Clark.)

9–11. Dorsal, lateral and ventral views, of the type specimen.

Merchantville clay-marl.



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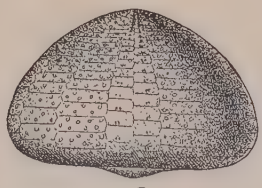

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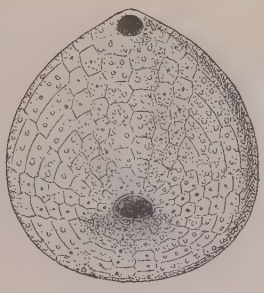

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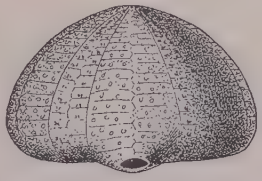

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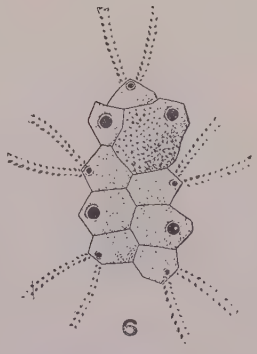

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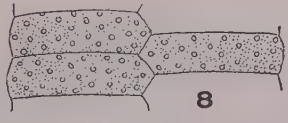

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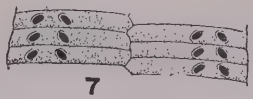

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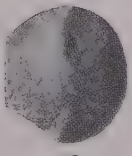

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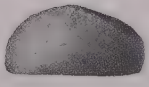

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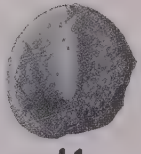

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ECHINODERMATA.

EXPLANATION OF PLATE XIV.

(All figures after Clark.)

CARDIASTER CINCTUS (Morton), ... p. 296

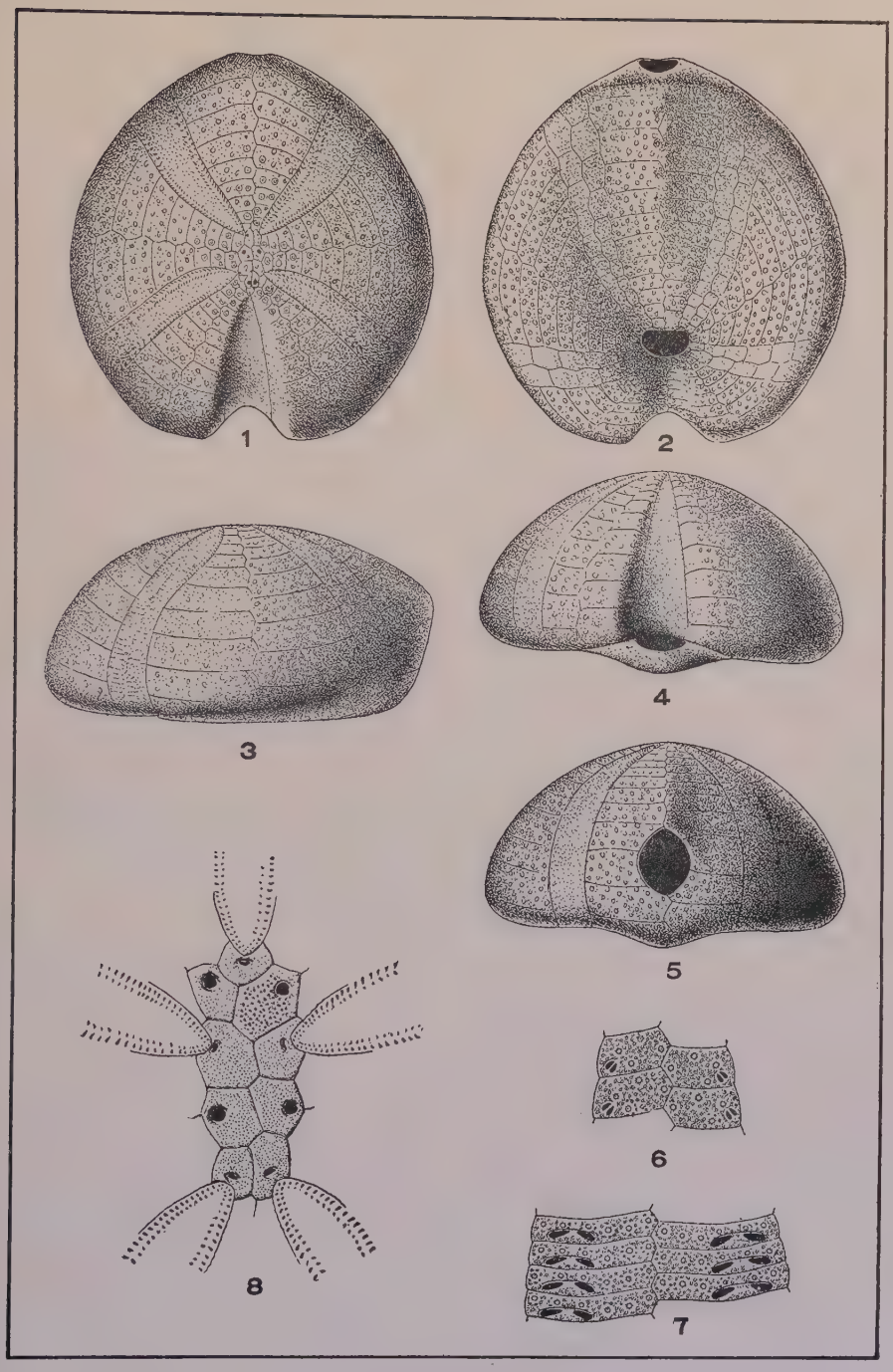
1–5. Dorsal, ventral, lateral, anterior and posterior views of a complete individual.

6. Basal portion of an ambulacral area, much enlarged.

7. Central portion of the petaloid region of an ambulacral area, much enlarged.

8. Apical disk, enlarged.

Vincentown limesand.



ECHINODERMATA.

EXPLANATION OF PLATE XV.

(All figures after Clark.)

HEMIASTER PARASTATUS (Morton), ... p. 298

1–4. Dorsal, ventral, lateral and posterior views of a complete individual.

5. Anterior ambulacrum, enlarged.

6–7. Portions of the petaloid and basal regions of the anterior ambulacrum, much enlarged.

8. Several plates from the petaloid region of the right antero-lateral ambulacrum, much enlarged.

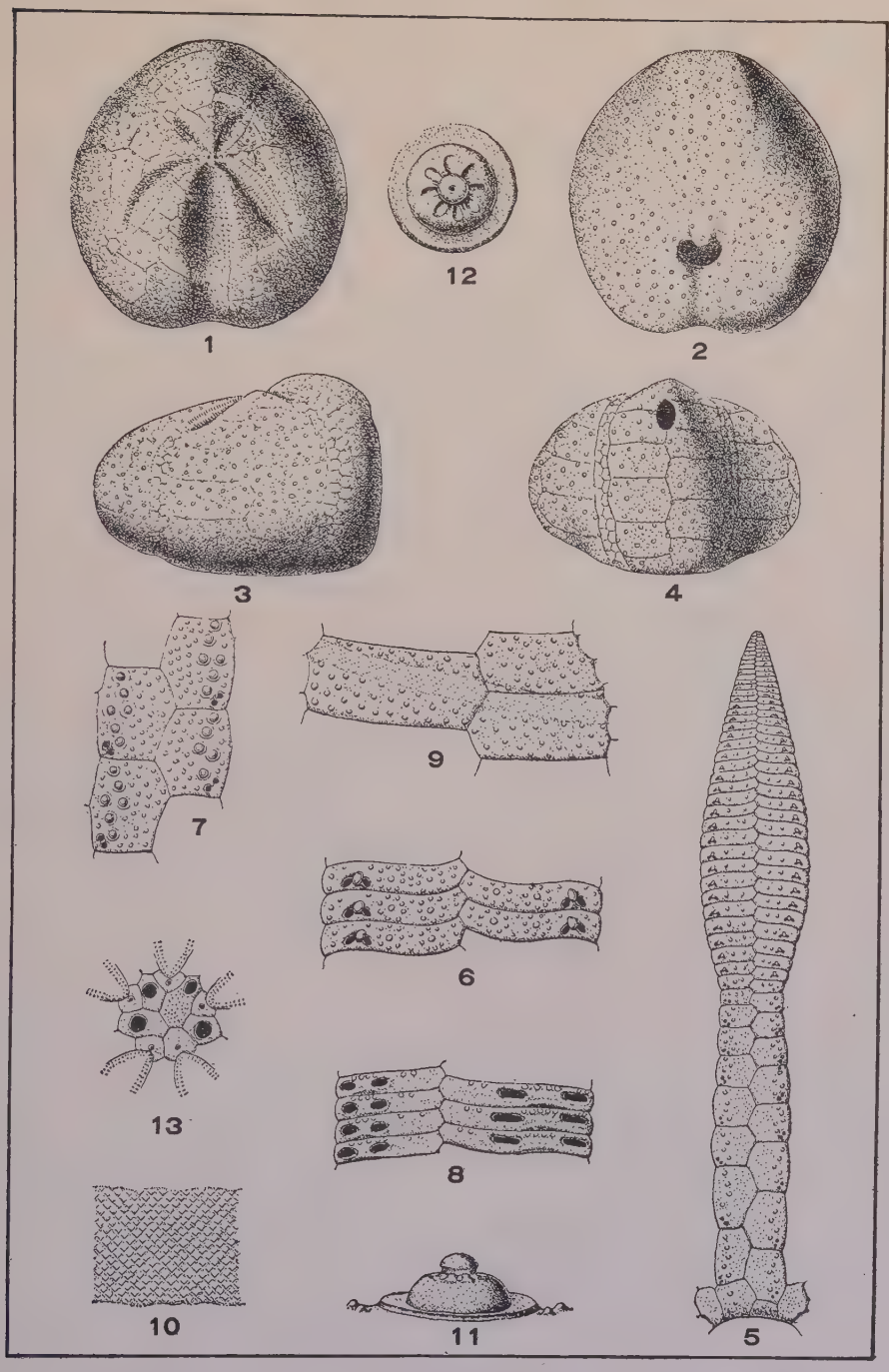
9. Three interambulacral plates with fasiole, enlarged.

10. Portion of fasciole, highly magnified.

11–12. Two views of a tubercle, from the side and from above.

13. Apical disk, enlarged.

Vincentown limesand.



ECHINODERMATA.

EXPLANATION OF PLATE XVI.

(All figures after Clark.)

HEMIASTER STELLA (Morton), ... p. 300

1–4. Dorsal, ventral, lateral and posterior views of a complete individual.

Vincentown limesand.

HEMIASTER UNGULA (Morton), ... p. 301

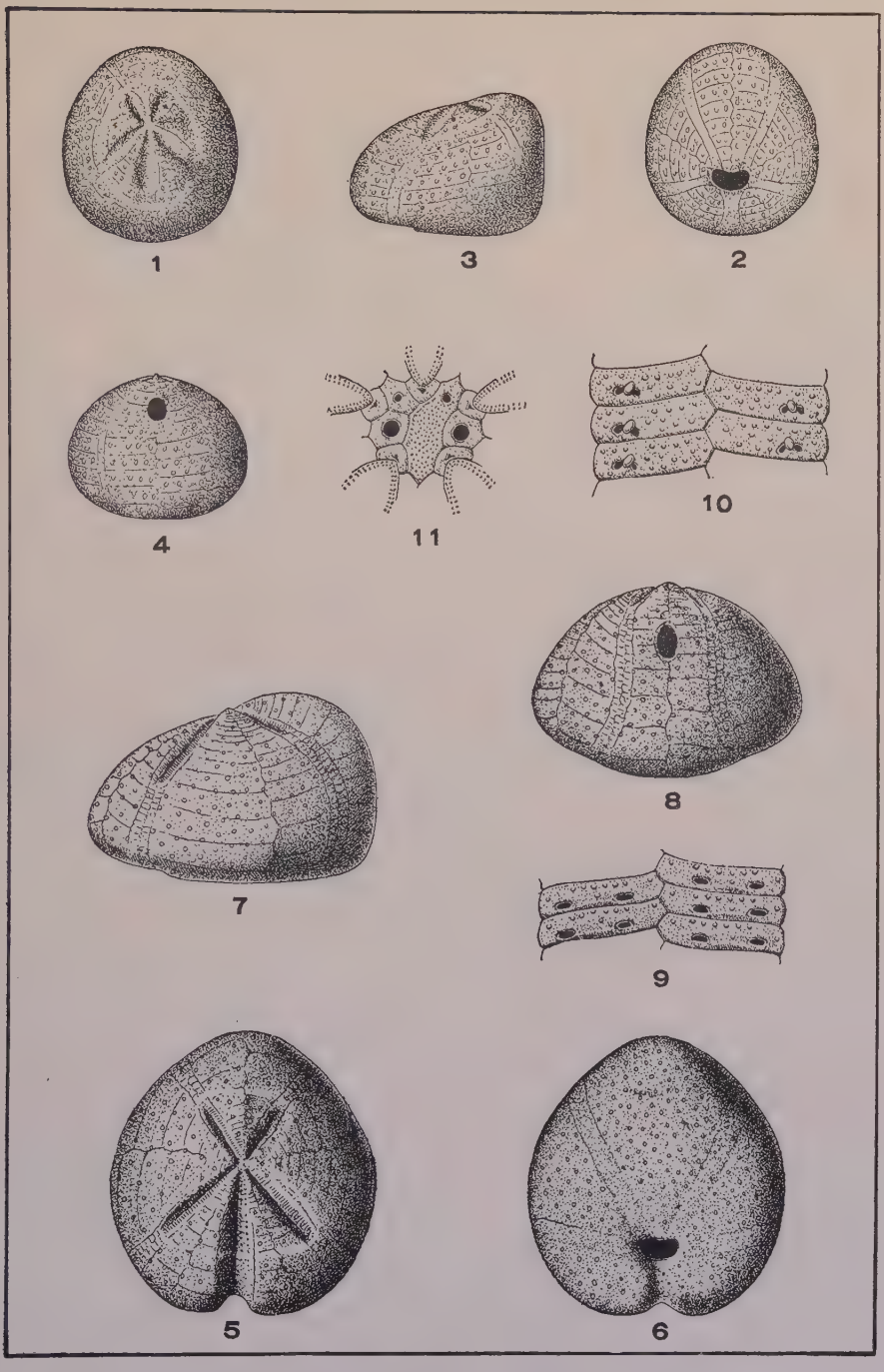
5–8. Dorsal, ventral, lateral and posterior views of a complete individual.

9. Portion of the petaloid region of the right antero-lateral ambulacrum, much enlarged.

10. Portion of the petaloid region of the anterior ambulacrum, much enlarged.

11. Apical disk, enlarged.

Vincentown limesand.



ECHINODERMATA.

EXPLANATION OF PLATE XVII.

(All illustrations contributed by Dr. W. B. Clark.)

HEMIASTER KÜMMELI Clark n. sp., ... p. 303

1–3. Dorsal, lateral and ventral views of the type specimen.
Woodbury clay; Lorillard, (102).

HEMIASTER WELLERI Clark n. sp., ... p. 302

4–6. Dorsal, lateral and ventral views of the type specimen.
Merchantville clay-marl; near Jamesburg, (141).

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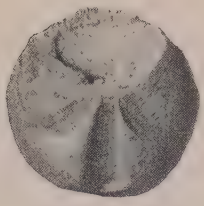

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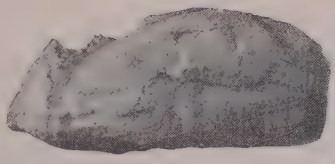

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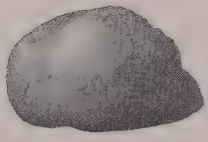

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ECHINODERMATA.

EXPLANATION OF PLATE XVIII.

(All figures after Clark.)

LINTHIA TUMIDULA Clark, ... p. 304

1–4. Dorsal, ventral, lateral and posterior views of a complete individual.

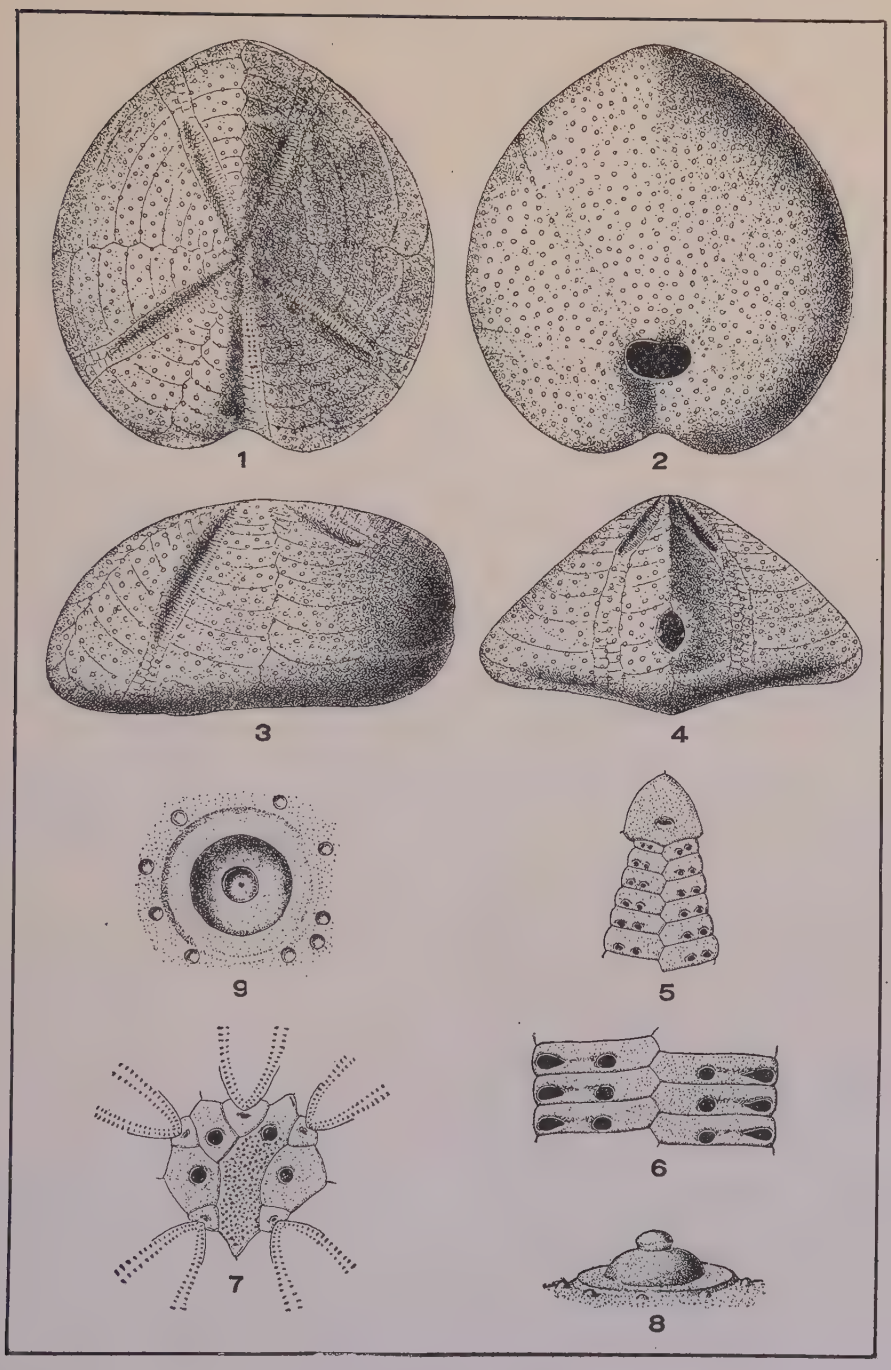
5. Upper portion of the anterior ambulacrum, enlarged.

6. Several plates from the petaloid region of the left postero-lateral ambulacrum, highly magnified.

7. Apical disk, enlarged.

8–9. Two views of a tubercle, from the side and from above.

Vincentown limesand.



ECHINODERMATA.

EXPLANATION OF PLATE XIX.

WORM BURROW, ... p. 311

1. View of an individual of average size.

Tinton Beds; Beers Hill Cut, (129[8]).

SERPULA WHITFIELDI n. sp.,..... p. 308

2. View of the type specimen, illustrated by Whitfield as *Diploconcha cretacea.*

Navesink Marl.

HAMULUS ?? sp.,..... p. 311

3. View of the internal cast.
4. View of a squeeze showing the external characters.

Wenonah sand; near Crawfords Corner, (126[3]).

SERPULA CIRCULARIS n. sp.,..... p. 307

5–6. Two views of the type specimen.

Marshalltown clay-marl; near Swedesboro (177).

HAMULUS LINEATUS n. sp.,..... p. 310

7. View of the specimen selected as type.

Merchantville clay-marl; Lenola, (163).

SERPULA ROTULA (Morton),..... p. 308

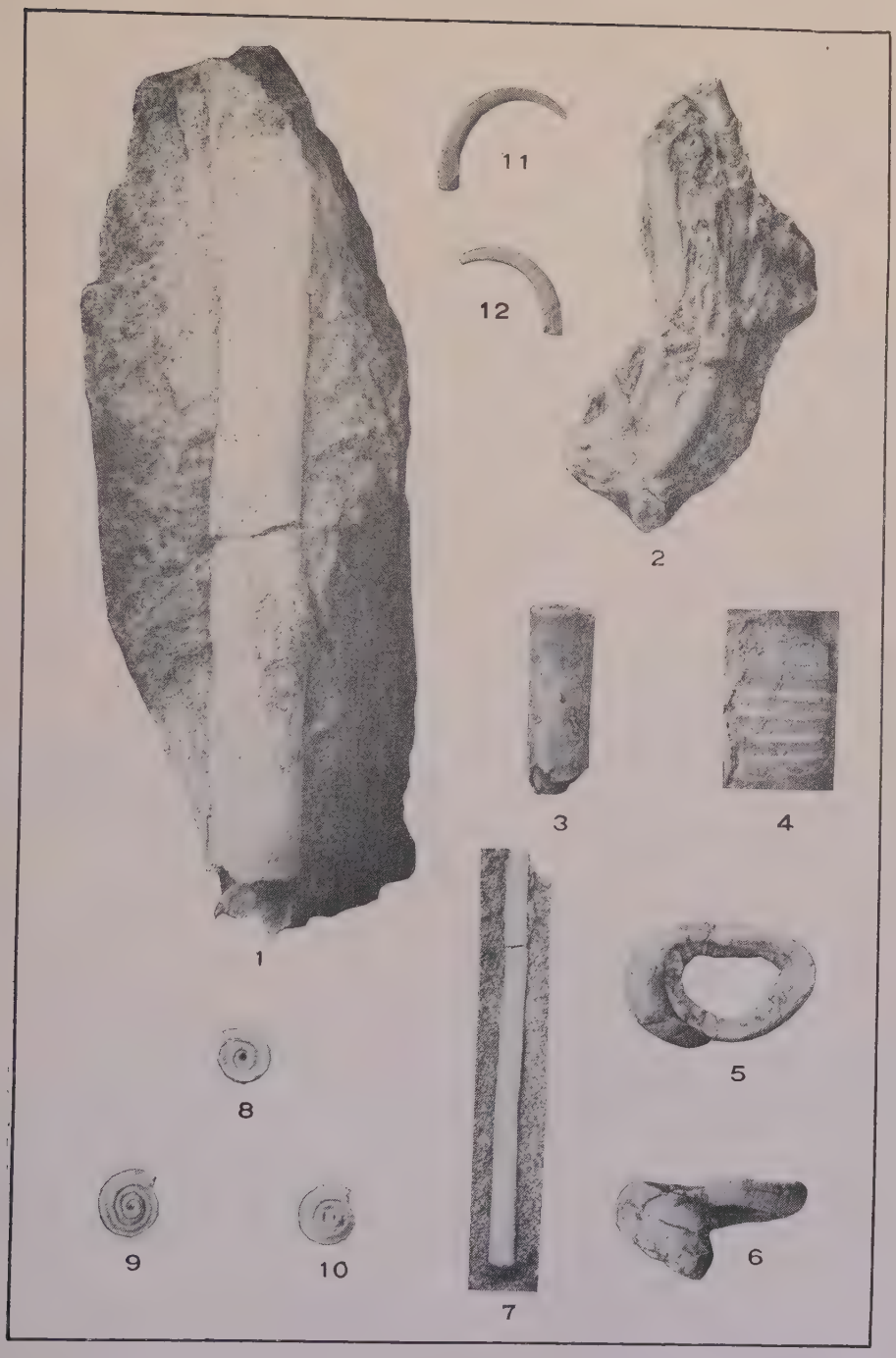
8–9. A sinistral and dextral specimen from the upper surface.
10. A sinistral specimen from the under side, showing the point of attachment.

Vincentown limesand; Vincentown, (154).

HAMULUS FALCATUS (Conrad),..... p. 309

11–12. Views of two different individuals illustrated by Whitfield.

Navesink marl.



VERMES.

EXPLANATION OF PLATE XX.

STOMATOPORA REGULARIS Gabb,.....p. 313

1–2. Two colonies growing upon *Onychocella digitata* (Mort.), (x2).

3. A similar colony, (x8).

Vincentown limesand; Vincentown, (154).

STOMATOPORA KUMMELI n. sp. Ulrich and Bassler,.....p. 314

4. The type specimen, (x2).

Vincentown limesand, Vincentown, (154).

STOMATOPORA TEMNICHORDA Ulrich and Bassler n. sp.,.....p. 314

5. Drawing of the type specimen, (x24).

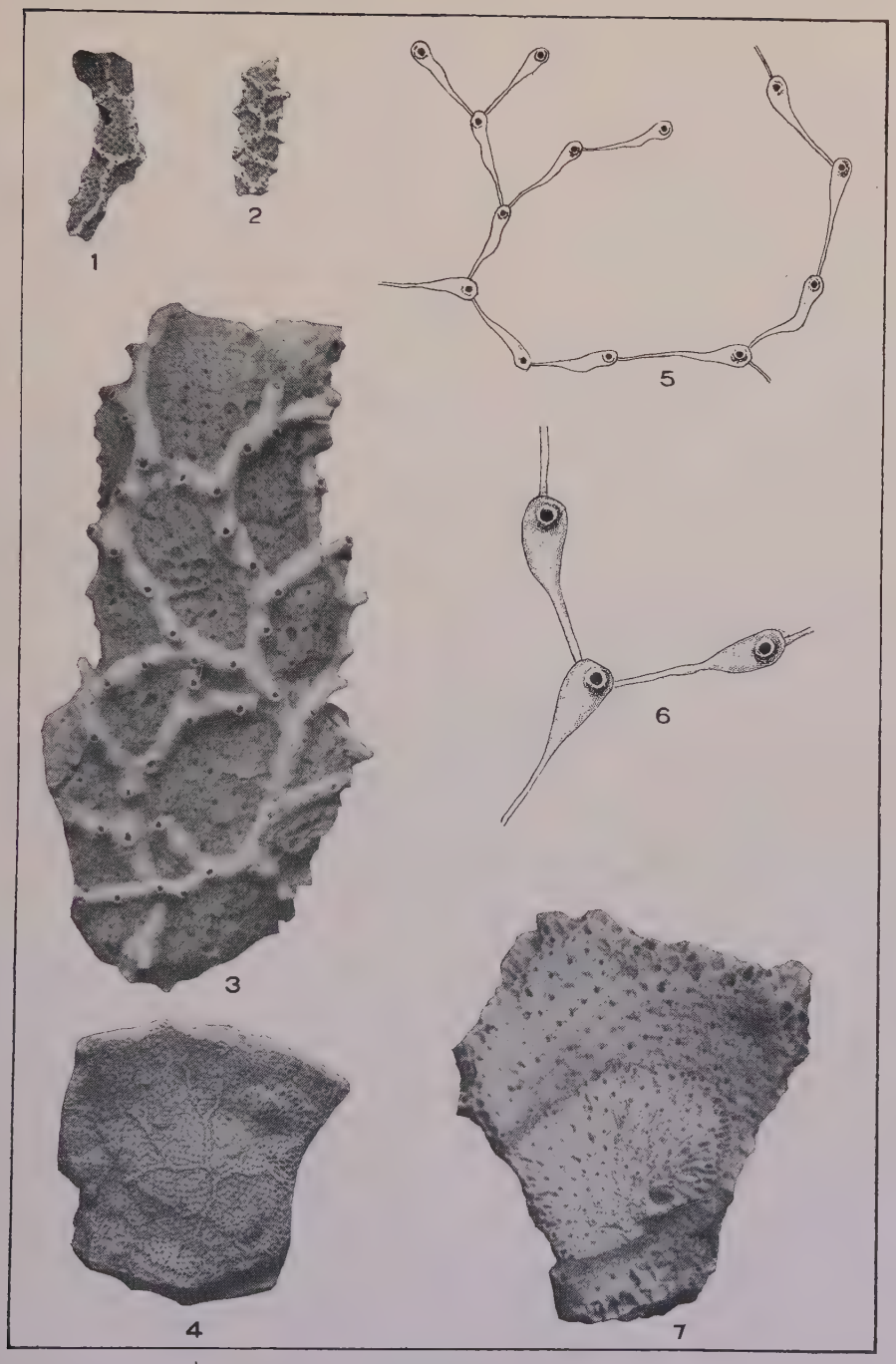
6. The same, (x40).

Vincentown limesand; Vincentown, (154).

BERENICEA AMERICANA Ulrich and Bassler n. sp.,.....p. 315

7. The type specimen, (x8).

Vincentown limesand; Vincentown, (154).



BRYOZOA.

EXPLANATION OF PLATE XXI.

DISCOSPARSA VARIANS Ulrich, ... p. 315

1. An attached colony, (x2).
2. A free colony, (x4).

Vincentown limesand; Vincentown, (154).

DIASTOPORA LINEATA Gabb and Horn, ... p. 316

3–4. Views of two specimens, (x3).

Vincentown limesand; Vincentown, (154).

RETICULIPORA DICHOTOMA Gabb and Horn, ... p. 318

5–9. Gabb and Horn's original figures.

10. Transverse section of a fragment, (x6), (after Ulrich).

11-12. Upper and lower portions of figure 10 enlarged 20 times showing the tubes with a longitudinal direction in the lower part; above they gradually turn upward while at the top, fig. 11, they are nearly at right angles to the length, (after Ulrich).

13. Portion of one side of a fragment, (x20), (after Ulrich).

14. A broken gonicyst which was formed over a previous smaller cyst which remains intact, (x20), (after Ulrich).

Vincentown limesand; Vincentown, (154).

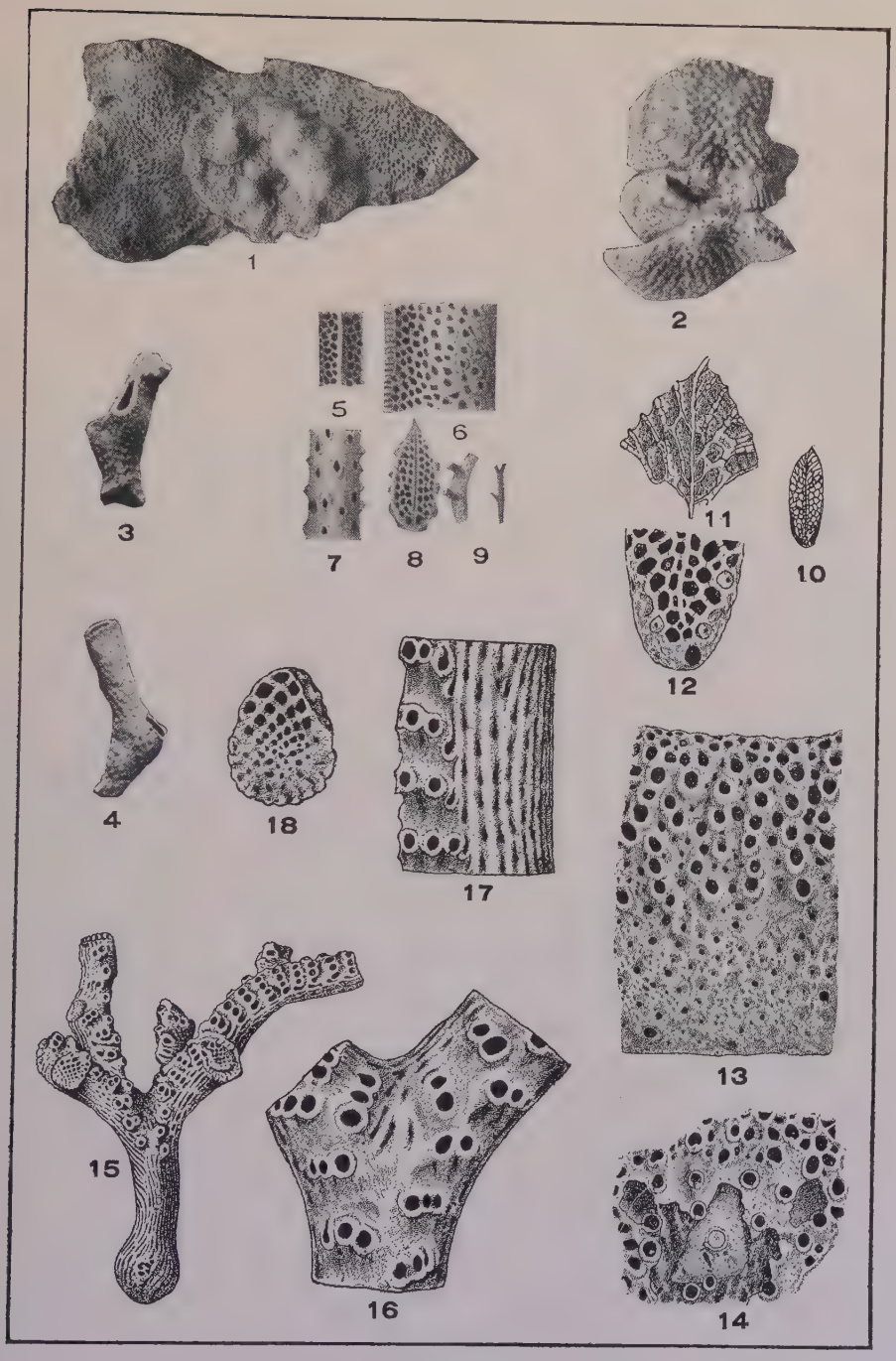
CRISINA STRIATOPORA Ulrich, ... p. 319

15. The type specimen from the Miocene of Maryland, (x5¼), (after Ulrich).

16. Upper surface of one of the branches of the same specimen, (after Ulrich).

17. Lateral view of the same, (x23), (after Ulrich).

18. Transverse section of one of the branches of the same, (x17), (after Ulrich).



BRYOZOA.

EXPLANATION OF PLATE XXII.

BISIDMONEA GABBIANA Ulrich and Bassler n. sp., ... p. 320
1–2. Views of two fragments, (x5).
Vincentown limesand; Vincentown, (154).

IDMONEA ABBOTTI Gabb and Horn, ... p. 321
3–4. Views of two fragments, (x8).
Vincentown limesand; Vincentown, (154).

FILISPARSA CONTORTILIS (Lonsdale), ... p. 322
5. View of the reverse side of a fragment, (x2).
6–7. Views of the celluliferous sides of two fragments, (x8).
Vincentown limesand, Vincentown, (154).

FILISPARSA BIFURCATA Ulrich and Bassler n. sp., ... p. 322
8. View of the celluliferous side of the type specimen, (x8).
Vincentown limesand; Vincentown, (154).

ENTALOPHORA CONRADI Gabb and Horn, ... p. 323
9. View of the type specimen, much enlarged, (after Gabb and Horn).
Vincentown limesand.

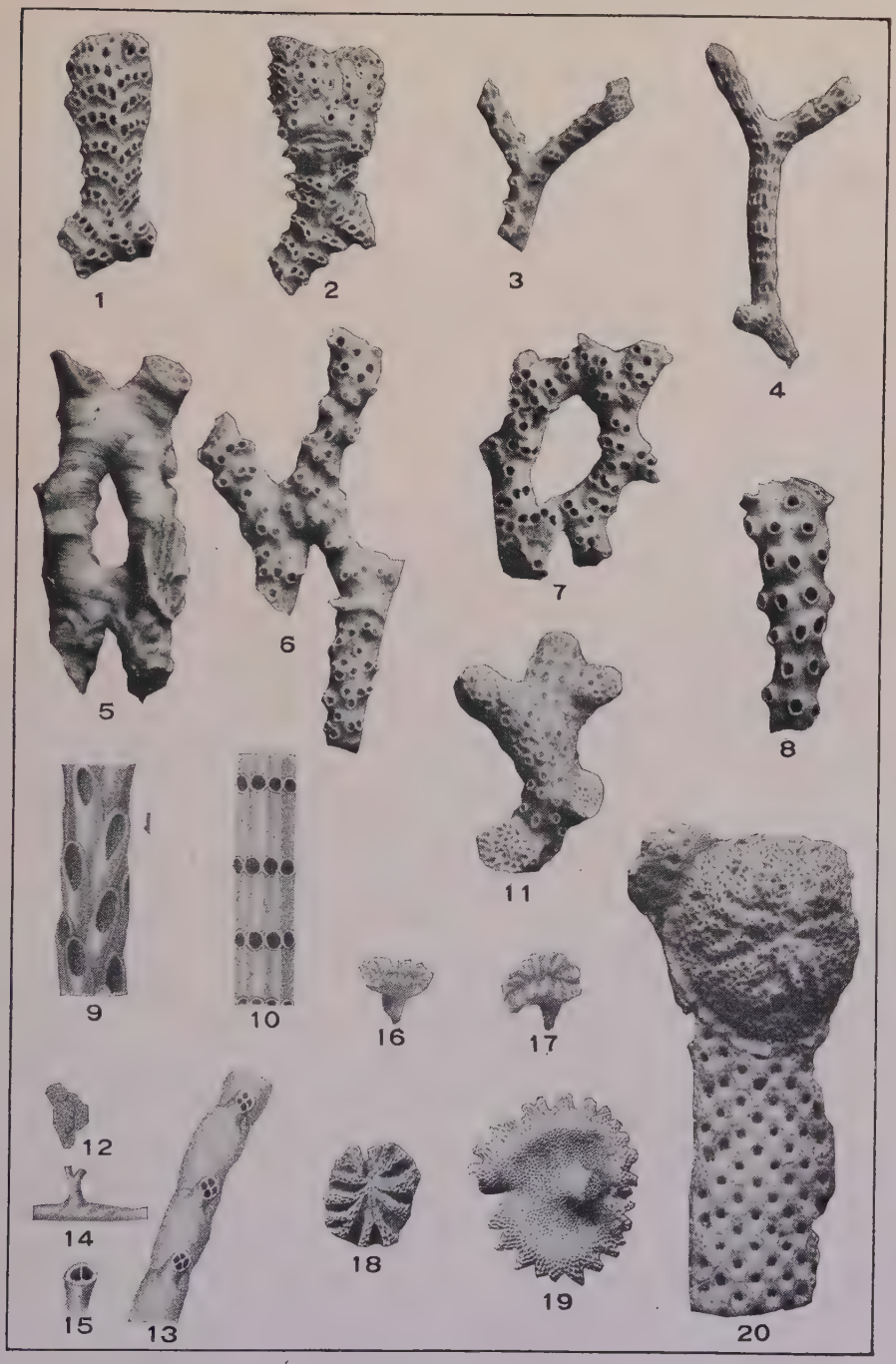
SPIROPORA CALAMUS Gabb and Horn, ... p. 324
10. View of the type specimen, much enlarged, (after Gabb and Horn).
Vincentown limesand.

CLAUSA AMERICANA Gabb and Horn, ... p. 325
11. View of a fragment of a colony, (x8).
Vincentown limesand; Vincentown, (154).

FILIFASCIGERA MEGAERA (Lonsdale), ... p. 325
12. View of a specimen natural size, seen encrusting another bryozoan.
13. View of a fragment much enlarged.
14–15. Two enlarged views showing details of structure. (All figures after Gabb and Horn.)
Vincentown limesand.

DISCOCYTIS ECCENTRICA Ulrich and Bassler n. sp., ... p. 326
16–17. Lateral views of two colonies, (x2).
18. Upper view of a colony, (x4).
19. Under view of a colony, (x4).
Vincentown limesand; Vincentown, (154).

LICHENOPORA PAPYRACEA (d'Orbigny), ... p. 327
20. View of a complete zoarium attached to *Onychocella digitata* (Mort.), (x8).
Vincentown limesand; Vincentown, (154).



BRYOZOA.

EXPLANATION OF PLATE XXIII.

HETEROPORA PARVICELLA (Gabb and Horn), ... p. 327

1–2. Views of two fragments of zoaria, (x3).
Vincentown limesand; Vincentown, (154).

RETELEA OVALIS Gabb and Horn, ... p. 328

3. View of a fragment of a zoarium, natural size.
4. View of a celluliferous surface, much enlarged. (Both figures after Gabb and Horn.)
Vincentown limesand.

FLUSTRELLA ? CAPISTRATA Gabb and Horn, ... p. 329

5. View of a fragment of a zoarium, much enlarged.
6. View of the basal expansion, much enlarged, described as *Membranipora abortiva* by Gabb and Horn. (Both figures after Gabb and Horn).
Vincentown limesand.

ONYCHOCELLA DIGITATA (Morton), ... p. 330

7–10. Views of four fragments of zoaria, (x2).
Vincentown limesand; Vincentown, (154).

BIFLUSTRA TORTA Gabb and Horn, ... p. 331

11–12. Views of two fragments of zoaria, (x3).
Vincentown limesand; Vincentown, (154).

BIFLUSTRA DISJUNCTA Gabb and Horn, ... p. 333

13. View of the celluliferous surface of a zoarium much enlarged. (After Gabb and Horn.)
Vincentown limesand.

AMPHIBLESTRUM HETEROPORA (Gabb and Horn), ... p. 333

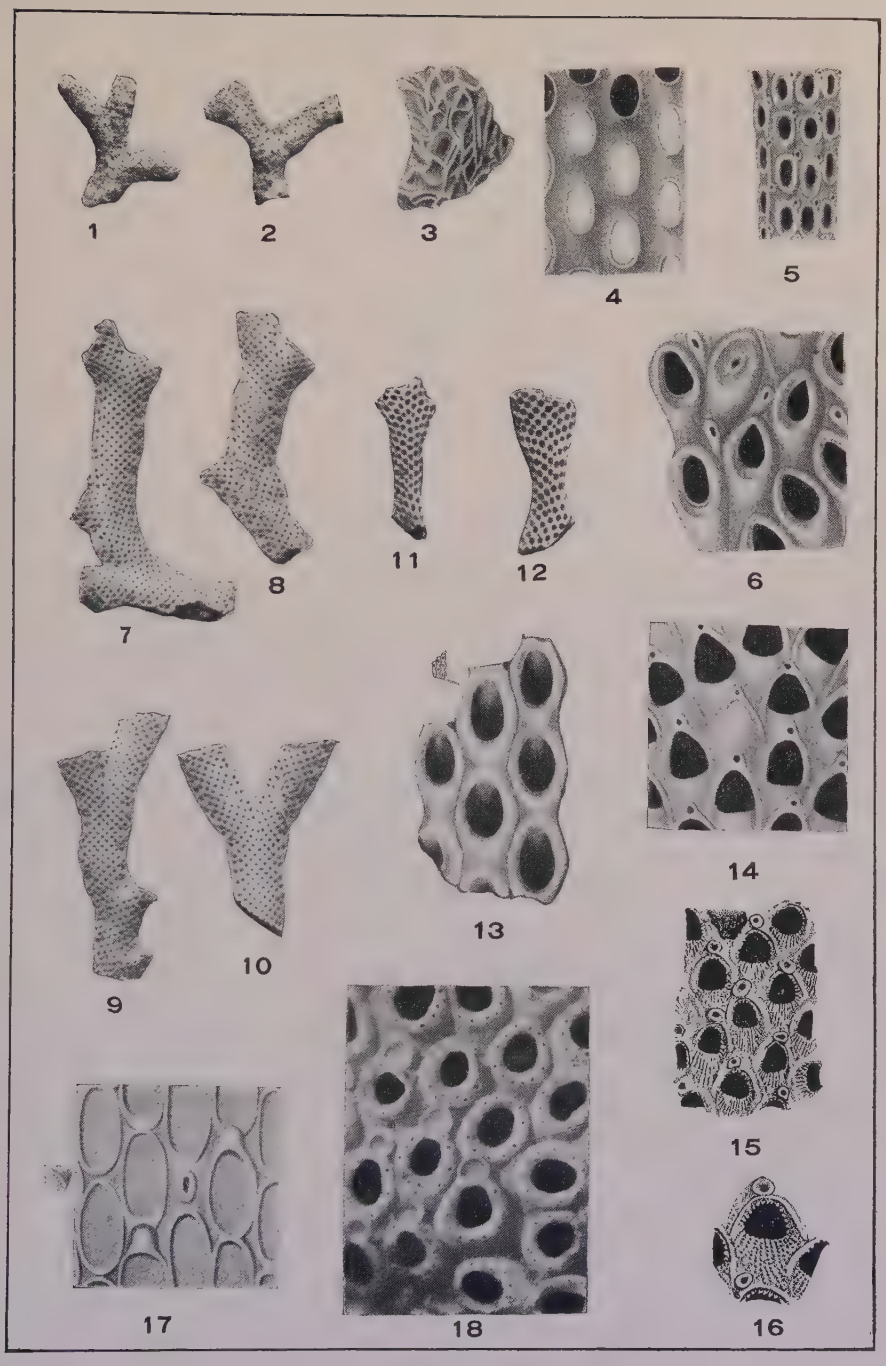
14. Surface of zoarium, much enlarged. (After Gabb and Horn.)
Vincentown limesand.
15. Surface of a zoarium from the Eocene, (x20). (After Maryland Geological Survey.)
16. View of a single zoecium more highly magnified. (After Maryland Geological Survey.)

MEMBRANIPORA PLEBIA Gabb and Horn, ... p. 334

17. Surface of zoarium much enlarged. (After Gabb and Horn.)
Vincentown limesand.

MEMBRANIPORA ANNULOIDEA Ulrich and Bassler n. sp., ... p. 335

18. Surface of the zoarium, (x24).
Vincentown limesand; Vincentown, (154).



BRYOZOA.

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EXPLANATION OF PLATE XXIV.

MEMBRANIPORA NEMATOPOROIDES Ulrich and Bassler n. sp., ...p. 336

1–2. Fragments of two zoaria, (x8).

Vincentown limesand; Vincentown, (154).

MEMBRANIPORA JERSEYENSIS Ulrich and Bassler n. sp., ...p. 336

3. Surface of zoarium, (x24).

Vincentown limesand; Vincentown, (154).

MEMBRANIPORA PERAMPLA Gabb and Horn, ...p. 337

4. Surface of zoarium, (x2).

Vincentown limesand; Vincentown, (154).

PYRIPORA IRREGULARIS Gabb and Horn, ...p. 337

5. View of a zoarium attached to another bryozoan, (x8).

Vincentown limesand; Vincentown, (154).

PLANICELLARIA OCULATA (D'Orbigny), ...p. 338

6–7. Views of two fragments of zoaria, (x8).

Vincentown limesand; Vincentown, (154).

PLANICELLARIA CYLINDRICA (Gabb and Horn), ...p. 339

8. View of a fragment of a zoarium, much enlarged. (After Gabb and Horn.)

Vincentown limesand.

ESCHARINELLA ALTIMURALIS Ulrich and Bassler n. sp., ...p. 339

9. Surface of zoarium, (x3).

10. Part of the surface of zoarium, (x24).

Vincentown limesand; Vincentown, (154).

CRIBRILINA SAGENA (Morton), ...p. 340

11. View of a fragment of a zoarium, (x2).

12. Surface of the zoarium, much enlarged. (After Gabb and Horn.)

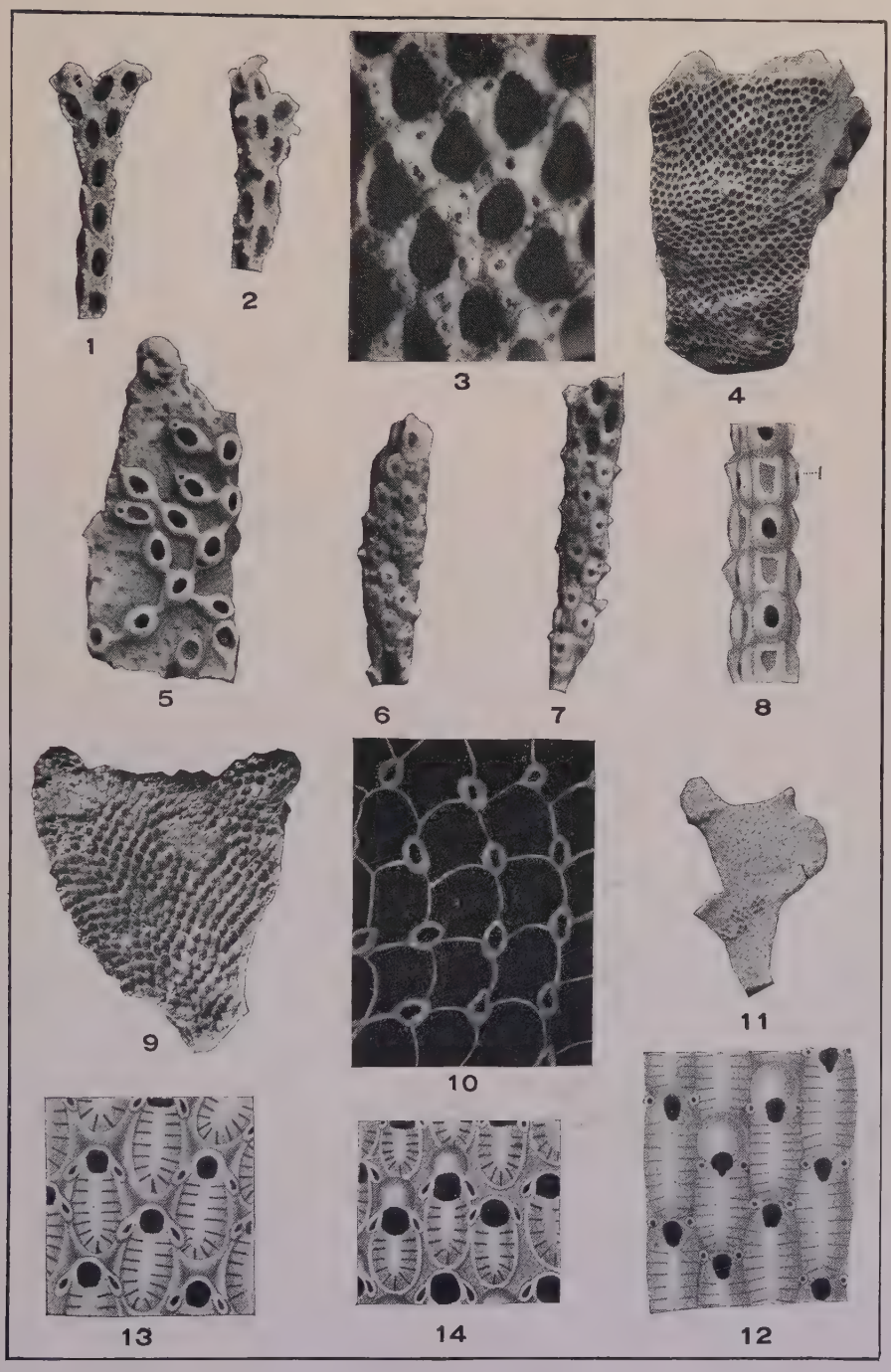
Vincentown limesand; Vincentown, (154).

MEMBRANIPORELLA ABBOTTI (Gabb and Horn), ...p. 342

13. Surface of zoarium, much enlarged.

14. Surface of zoarium described as *Repteschariporα marginata* by Gabb and Horn, much enlarged. (Both figures after Gabb and Horn.)

Vincentown limesand.



BRYOZOA.

EXPLANATION OF PLATE XXV.

MEMBRANIPORELLA DISTANS (Gabb and Horn), ...p. 344

1. Surface of zoarium, much enlarged. (After Gabb and Horn.)

Vincentown limesand.

REPTESCHARELLINA PROLIFERA Gabb and Horn, ...p. 346

2. Much enlarged surface of zoarium. (After Gabb and Horn.)

Vincentown limesand.

MICROPORA PULCHRA Ulrich and Bassler n. sp., ...p. 347

3. Fragment of zoarium, (x24).

Vincentown limesand; Vincentown, (154).

MICROPORA CYLINDRACEA Ulrich and Bassler n. sp., ...p. 347

4. Fragment of a zoarium, (x24).

Vincentown limesand; Vincentown, (154).

MONOPORELLA EXSERTA Ulrich and Bassler n. sp., ...p. 349

5–6. Surfaces of two zoaria, (x8).

7. Surface of zoarium, (x3).

Vincentown limesand; Vincentown, (154).

MICROPORELLA SPARSIPORA Ulrich and Bassler n. sp., ...p. 348

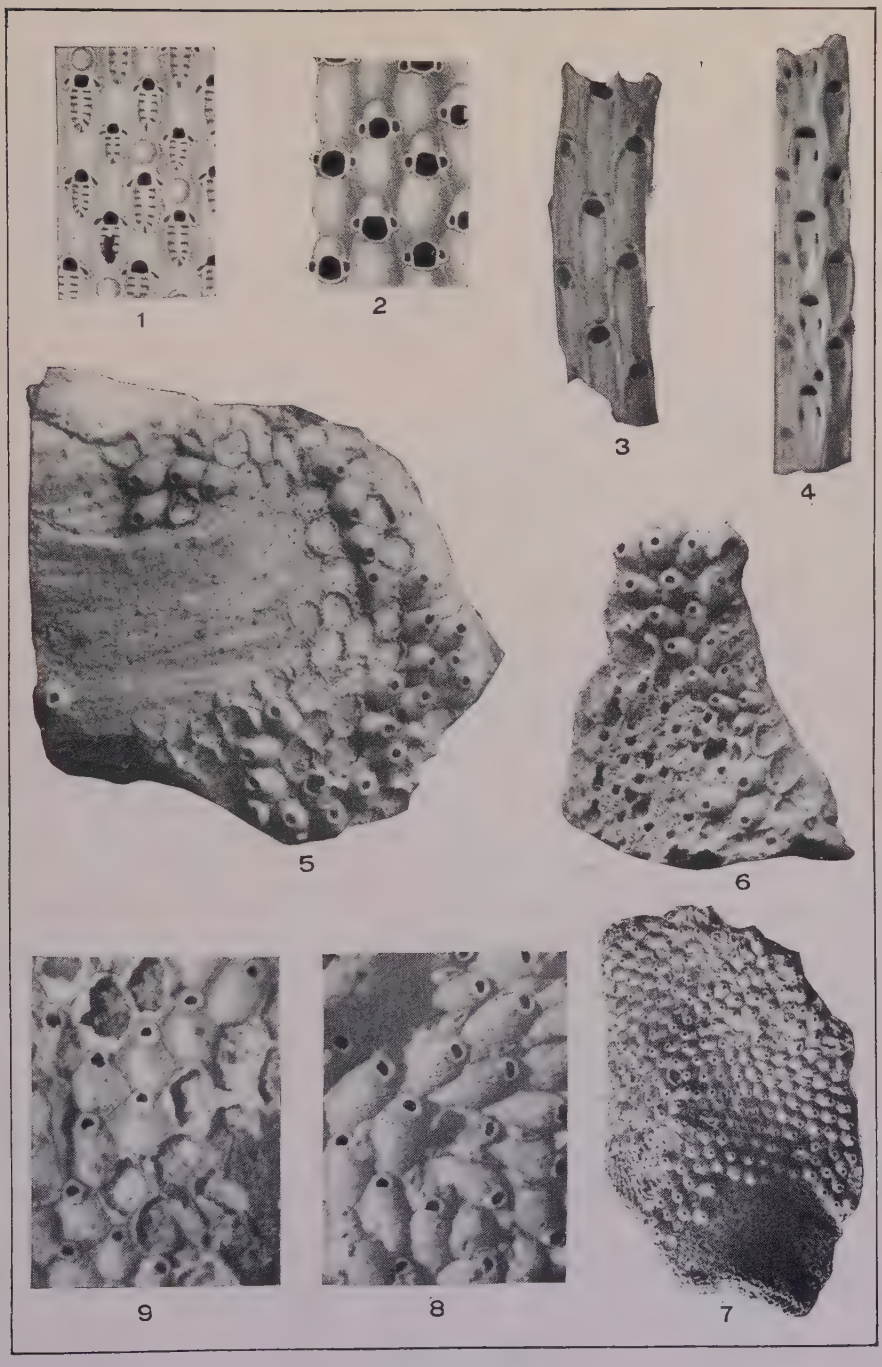
8. Surface of zoarium, (x24).

Vincentown limesand; Vincentown, (154).

MICROPORA ? VINCENTOWNENSIS Ulrich and Bassler n. sp., ...p. 348

9. Surface of zoarium, (x24).

Vincentown limesand; Vincentown, (154).



BRYOZOA.

EXPLANATION OF PLATE XXVI.

PORINA LABIATA (Gabb and Horn),.....p. 350

1. Fragment of zoarium, natural size.
2. The same much enlarged.
3. Surface of zoarium much enlarged.
4. View of ovicell, much enlarged.
5. A longitudinal section, enlarged.
6. A cross section, enlarged.

(All figures after Gabb and Horn.)

Vincentown limesand.

PORINA QUADRANGULARIS Gabb and Horn,.....p. 350

7. Fragment of a zoarium possibly belonging to this species, (x6).
8. View of the type specimen. (After Gabb and Horn.)

Vincentown limesand; Vincentown, (154).

LEPRALIA ASPERA (Gabb and Horn),.....p. 352

9. Much enlarged surface of zoarium. (After Gabb and Horn.)

Vincentown limesand.

MUCRONELLA MURALIS (Gabb and Horn),.....p. 352

10. Much enlarged surface of zoarium. (After Gabb and Horn.)

Vincentown limesand.

PORINA CORONATA (Reuss)?.....p. 351

11. Fragment of zoarium, (x6).

Vincentown limesand; Vincentown, (154).

MUCRONELLA TYPICA (Gabb and Horn),.....p. 353

12. Fragment of zoarium, (x2).
13. Fragment of zoarium, (x4).

Vincentown limesand; Vincentown, (154).

MUCRONELLA ASPERA Ulrich, ...p. 354

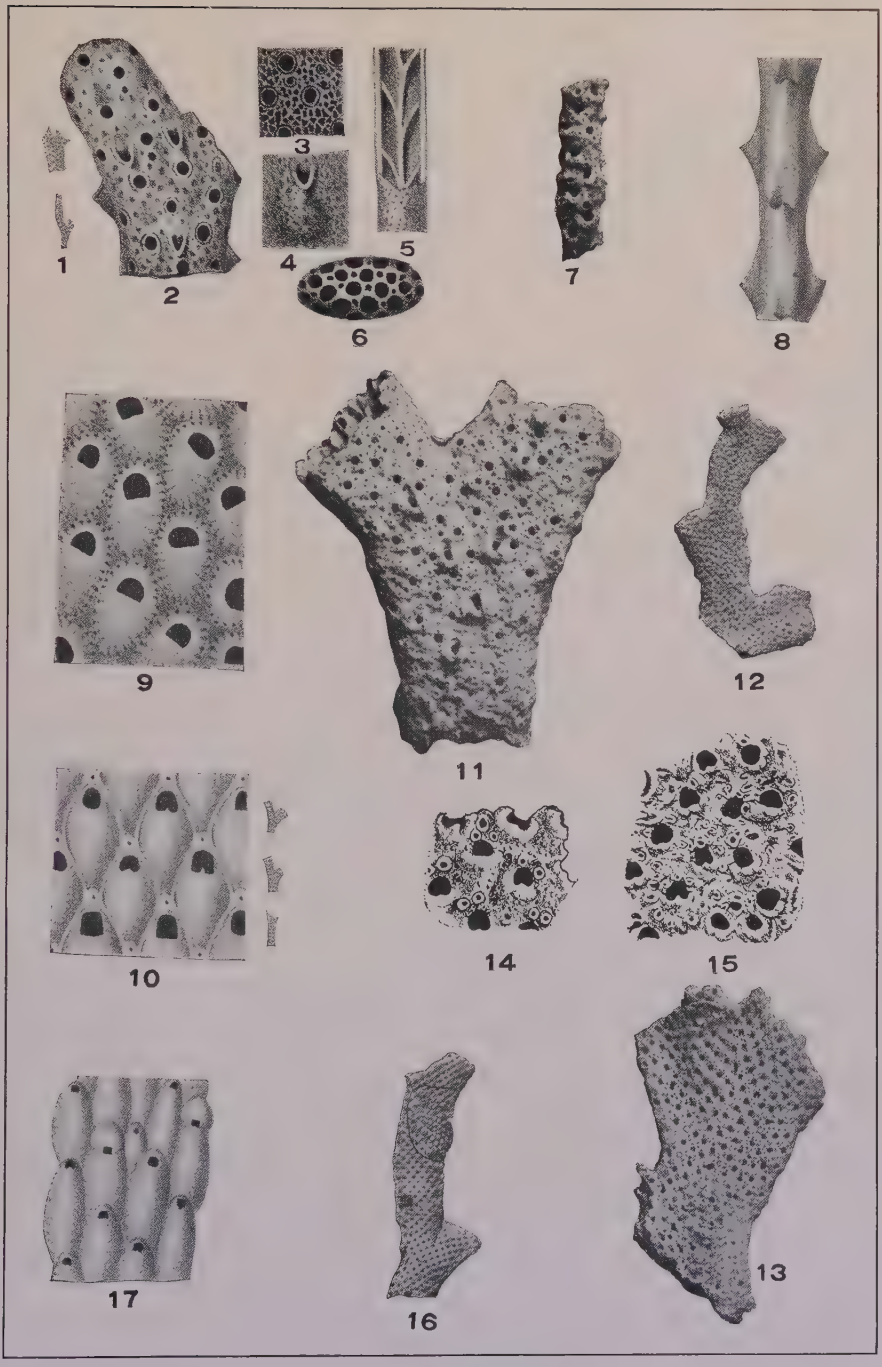
14–15. Surface characters of two Eocene zoaria, (x20).

(After Maryland Geological Survey.)

MUCRONELLA PUMILA (Gabb and Horn), ...p. 355

16. View of an encrusting zoarium upon a specimen of *Onychocella digitata,* (x2).
17. Much enlarged surface of zoarium. (After Gabb and Horn.)

Vincentown limesand; Vincentown, (154).



BRYOZOA.

EXPLANATION OF PLATE XXVII.

TEREBRATELLA PLICATA (Say), ... p. 364

1–10. Two views each of five different individuals, showing something of the range of variation of the species.

Navesink marl; near Crawfords Corner, (126[1]).

11. The brachidium. (After Whitfield.)

TEREBRATELLA VANUXEMI (Lyell and Forbes), ... p. 366

12–13. Two views of a very perfect individual.

Navesink marl; near Holmdel, (128[3]).

CISTELLA BEECHERI Clark, ... p. 361

14–17. Views of four different individuals.

Vincentown limesand; Vincentown, (154).

PLATIDA CRETACEA n. sp., ... p. 363

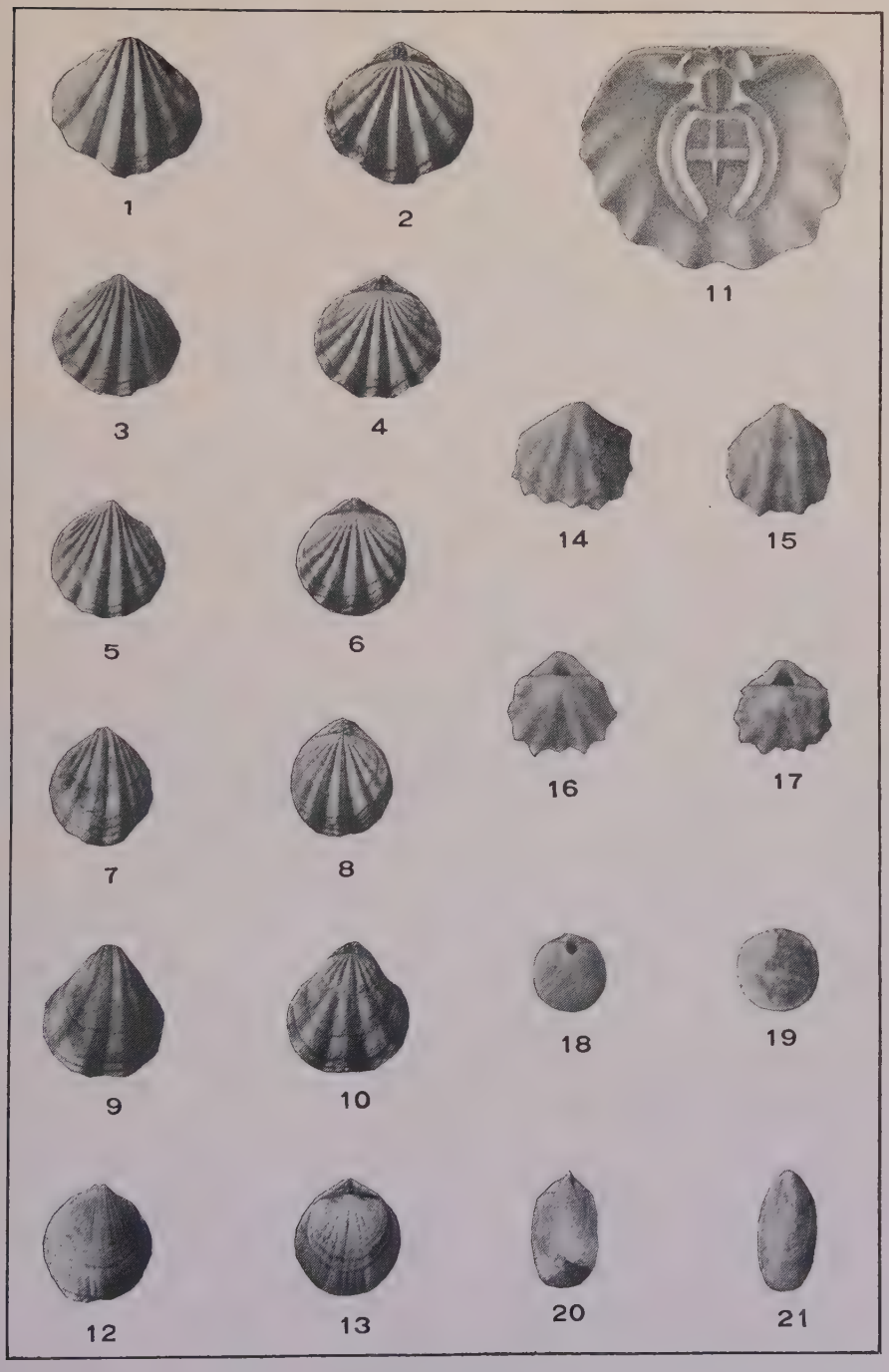
18–19. Views of the type specimens..

Vincentown limesand; Vincentown, (154).

LINGULA SUBSPATULA Hall and Meek, ... p. 356

20–21. Views of two individuals.

Woodbury clay; Lorillard, (102).



BRACHIOPODA.

EXPLANATION OF PLATE XXVIII.

TEREBRATULA HARLANI Morton, ... p. 357

1–3. Three views of a very perfect specimen of the typical form.
Vincentown formation; near New Egypt.

4–6. Three views of a specimen belonging to the variety *fragiles*.
Same locality.

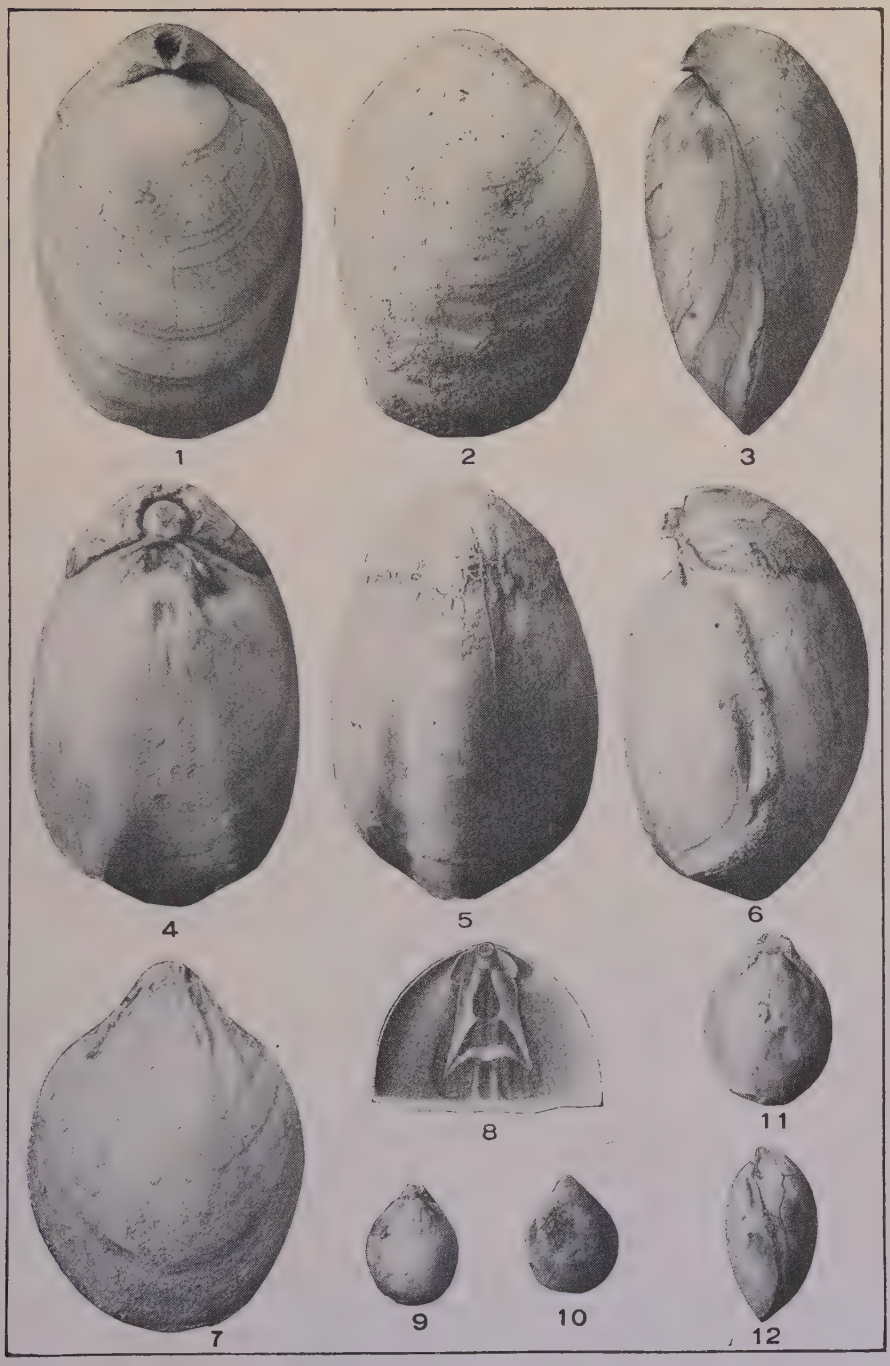
7. Internal cast of pedicle valve.
Vincentown sand; near Deal, (122).

8. The brachidium. (After Whitfield.)

TEREBRATULINA ATLANTICA (Morton), ... p. 360

9–10. Two views of a nearly perfect internal cast.

11–22. Two views of a similar but somewhat larger individual.
Manasquan marl; Farmingdale, (138).



BRACHIOPODA.

EXPLANATION OF PLATE XXIX.

NUCULA PERCRASSA Con., ... p. 369

1. Internal cast of a right valve.
Cliffwood clay; Cliffwood Point, (105).

2–3. Views of two internal casts.
Merchantville clay-marl; Lenola, (163).

4. Internal cast of a right valve.
Woodbury clay; Lorillard, (102).

5. A right valve with the shell preserved.
Marshalltown clay-marl; near Swedesboro, (177).

NUCULA WHITFIELDI n. sp., ... p. 371

6–9. Internal casts of several valves.
Wenonah sand; near Marlboro, (130).

10. Internal cast of a right valve.
Wenonah sand; near Crawfords Corner, (126[3]).

11–12. Internal casts of a right and a left valve.
Woodbury clay; Lorillard, (102).

LEDA COMPRESSIFRONS (Whitfield), ... p. 372

13–14, 15–16. Views of two internal casts, a left and a right valve, natural size and enlarged two diameters.
Woodbury clay; Lorillard, (102).

17. Internal cast of a right valve probably belonging to this species.
Merchantville clay-marl; near Jamesburg, (139).

LEDA MARLBOROENSIS n. sp., ... p. 374

18–19. Views of two internal casts, a right and a left valve.

20–21. The same, (x2).
Wenonah sand; near Marlboro, (130).

22. Internal cast of a left valve.

23. The same, (x2).
Wenonah sand; near Crawfords Corner, (126[3]).

LEDA CLIFFWOODENSIS n. sp., ... p. 377

24–25. Right side and dorsal aspect of the type specimen, a very perfect internal cast.
Cliffwood clay; Cliffwood Point, (105).

LEDA PROTEXTA Gabb, ... p. 375

26. View of the type specimen, partially restored. (After Whitfield.)
Navesink marl.

LEDA PINNAFORMIS Gabb, ... p. 373

27. View of type specimen, (x3). (After Whitfield.)
Woodbury clay; Haddonfield, (183).

LEDA GABBANA (Whitfield), ... p. 378

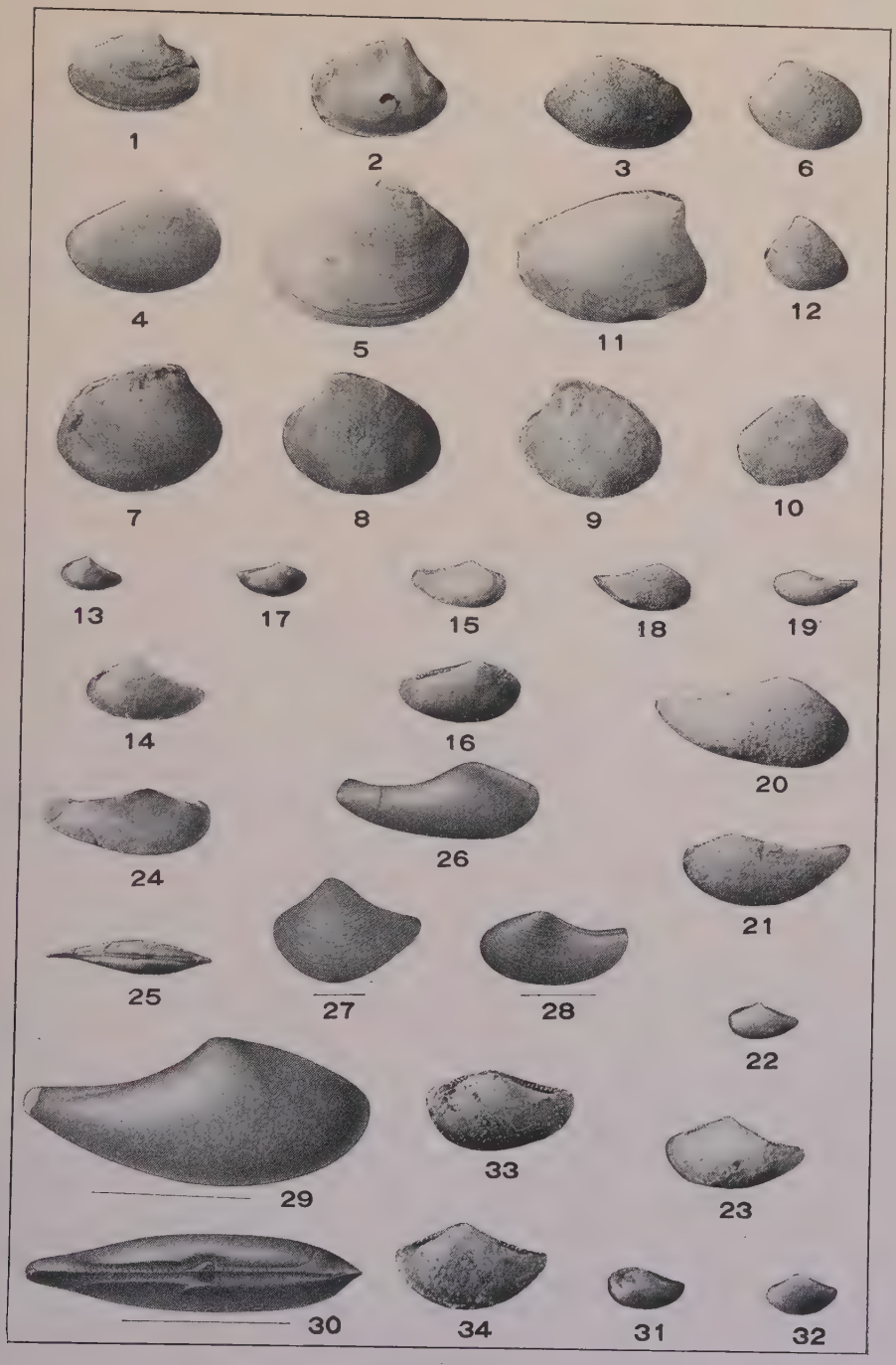
28. View of a small individual identified by Whitfield. (After Whitfield.)

29–30. Two views of a larger individual identified by Whitfield. (After Whitfield.)
Navesink marl.

LEDA TINTONENSIS n. sp., ... p. 379

31–32. Views of the two type specimens.

33–34. The same, (x2).
Tinton beds; Beers Hill Cut, (129[5]).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PELECYPODA.

EXPLANATION OF PLATE XXX.

PERRISONOTA PROTEXTA Conrad, ... p. 379

1–2. Views of two internal casts of left valves, showing the impression of the hinge.

Red Bank sand; Shrewsbury River, (119).

YOLDIA CLIFFWOODENSIS n. sp., ... p. 383

3. The internal cast of a left valve, imperfect posteriorly.

Cliffwood clay; Cliffwood Point, (185).

4. The internal cast of a right valve.

Cliffwood clay; near Matawan, (107).

YOLDIA LONGIFRONS (Conrad), ... p. 381

5. A very perfect internal cast of a left valve, showing the impression of the hinge.

Woodbury clay; Lorillard, (102).

YOLDIA PAPYRIA (Conrad), ... p. 382

6. View of an internal cast of a right valve, showing the impression of the hinge.

Woodbury clay; near Matawan, (103).

NEMODON CONRADI Johnson, ... p. 387

7. The internal cast of a right valve.

Woodbury clay; Lorillard, (102).

NEMODON EUFAULENSIS (Gabb), ... p. 385

8. The internal cast of a right valve.

Merchantville clay-marl; near Jamesburg, (139).

9. The internal cast of a left valve.

Red Bank sand; Red Bank, (116).

10. The internal cast of a left valve. The specimen illustrated by Whitfield.

Navesink marl.

11. A small form doubtfully referred to this species.

Vincentown formation; near Farmingdale, (134).

NEMODON BREVIFRONS Conrad, ... p. 389

12. A very perfect internal cast of the right valve.

Cliffwood clay; Cliffwood Point, (105).

13. The internal cast of a right valve.

Wenonah sand; near Marlboro, (130).

14. The internal cast of a large left valve referred doubtfully to this species.

Wenonah sand; near Crawfords Corner, (126[2]).

NEMODON ANGULATUM (Gabb), ... p. 388

15. The left side of the type specimen. (After Whitfield.)

Navesink marl?

TRIGONARCA TRIQUETRA Conrad, ... p. 402
16. The internal cast of a right valve, showing the impression of the hinge.
Cliffwood clay; Cliffwood Point, (185).

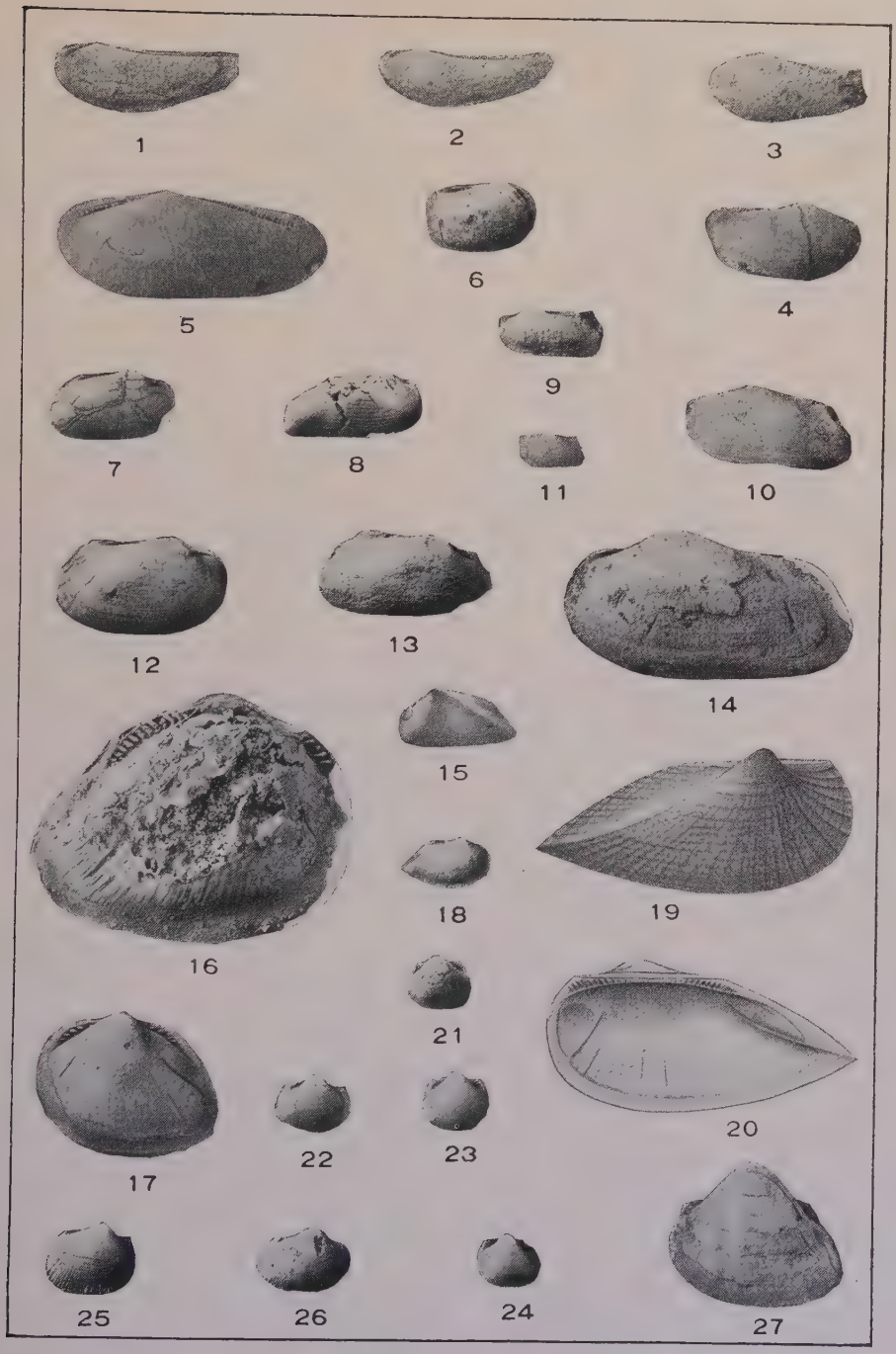
TRIGONARCA CLIFFWOODENSIS n. sp., ... p. 401
17. The internal cast of a left valve, the type specimen.
Cliffwood clay; Cliffwood Point, (185).

TRIGONARCA CUNEIFORMIS Conrad, ... p. 403
18. The internal cast of a right valve, (x2).
Woodbury clay; near Matawan, (103).
19–20. External and internal views of a perfect right valve, (x7). (After Whitfield.)
Woodbury clay; Haddonfield, (183).

BREVIARCA SAFFORDI (Gabb), ... p. 404
21–24. Views of four different internal casts of single valves.
Woodbury clay; Lorillard, (102).

BREVIARCA CUNEATA (Gabb), ... p. 406
27. View of the internal cast of a left valve.
Woodbury clay; Lorillard, (102).

NEMOARCA CRETACEA Conrad, ... p. 413
25. The internal cast of a right valve.
Woodbury clay; Lorillard, (102).
26. The internal cast of a right valve.
Merchantville clay-marl; near Matawan, (101).



PELECYPODA.

EXPLANATION OF PLATE XXXI.

CUCULLAEA NEGLECTA Gabb, ... p. 396

1–2. Views of the right side and posterior end of a very perfect internal cast.

Navesink marl; Mullica Hill, (169).

3–4. Views of the left side and posterior end of a very perfect internal cast.

Navesink marl; near Holmdel, (127^2).

CUCULLAEA TIPPANA Conrad, ... p. 394

5. The internal cast of a right valve.

Red Bank sand; Shrewsbury River, (119).

6. The cardinal area, a plaster cast from a natural impression of the shell.

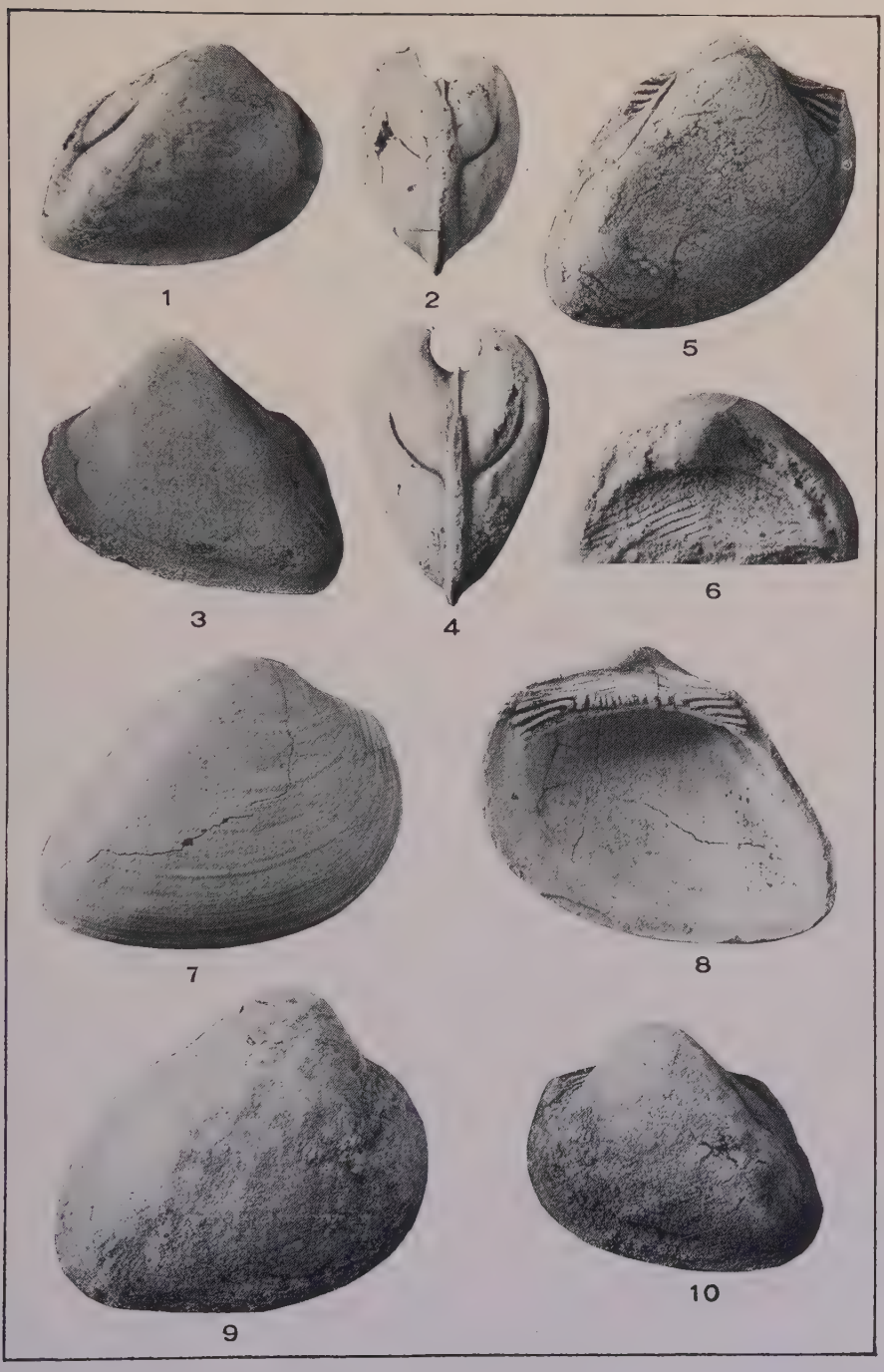
Same locality.

7–8. External and internal views of a very perfect right valve.

Marshalltown clay-marl; near Swedesboro, (177).

9–10. Views of two internal casts, a right valve and a left valve.

Tinton beds; Beers Hill Cut, (129^7).



PELECYPODA.

EXPLANATION OF PLATE XXXII.

CUCULLAEA TIPPANA Con., ... p. 394

1–2. Views of the left side and posterior end of a very perfect internal cast.

Marshalltown clay-marl; Marshalltown, (190).

CUCULLAEA COMPRESSIROSTRA Whitf., ... p. 399

3–4. Views of the posterior end and the left side of the internal cast used by Whitfield as type of the species.

Sewell marl; Tinton Falls, (Cook's Pits).

CUCULLAEA VULGARIS Morton, ... p. 397

5–6. Views of the right side and the posterior end of a very perfect internal cast.

Sewell marl; near Hornerstown, (152).

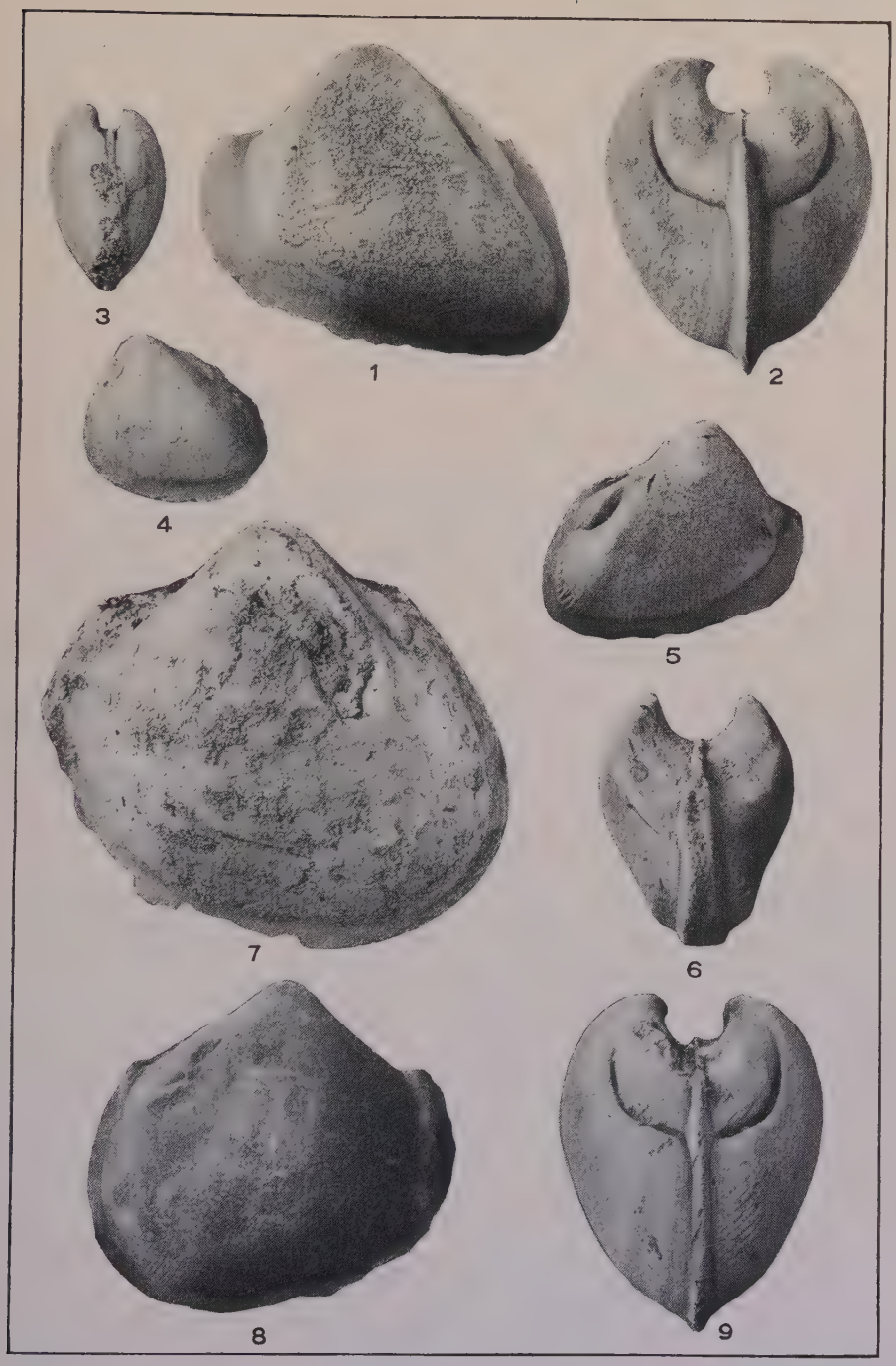
CUCULLAEA ANTROSA Morton, ... p. 391

7. Internal cast of a large left valve.

Navesink marl; near Walnford, (148[4]).

8–9. Views of the right side and posterior end of a very perfect internal cast illustrated by Whitfield.

Navesink marl.



PELECYPODA.

EXPLANATION OF PLATE XXXIII.

CUCULLAEA LITTLEI (Gabb), ... p. 400

1–2. Views of the right side and the posterior end of a nearly perfect internal cast of this species.

Tinton beds; Beers Hill cut, (*129*^{r}).

PELECYPODA

EXPLANATION OF PLATE XXXIV.

CUCULLAEA WOODBURYENSIS n. sp., ... p. 393

1. The type specimen, an internal cast of a left valve.
Woodbury clay; Lorillard, (102).

ARCA QUINDECEMRADIATA Gabb, ... p. 410

2–3. Views of the left side and the posterior end of a nearly perfect internal cast.
Vincentown limesand; Hurffville, (171).

ARCA ROSTELLATA Morton, ... p. 408

4–5. Views of the right side and dorsal margin of a very perfect internal cast figured by Whitfield.
Navesink marl; Holmdel.

ARCA UNIOPSIS Conrad, ... p. 407

6. An internal cast of the right valve.
Navesink marl; Crosswicks Creek, (149).

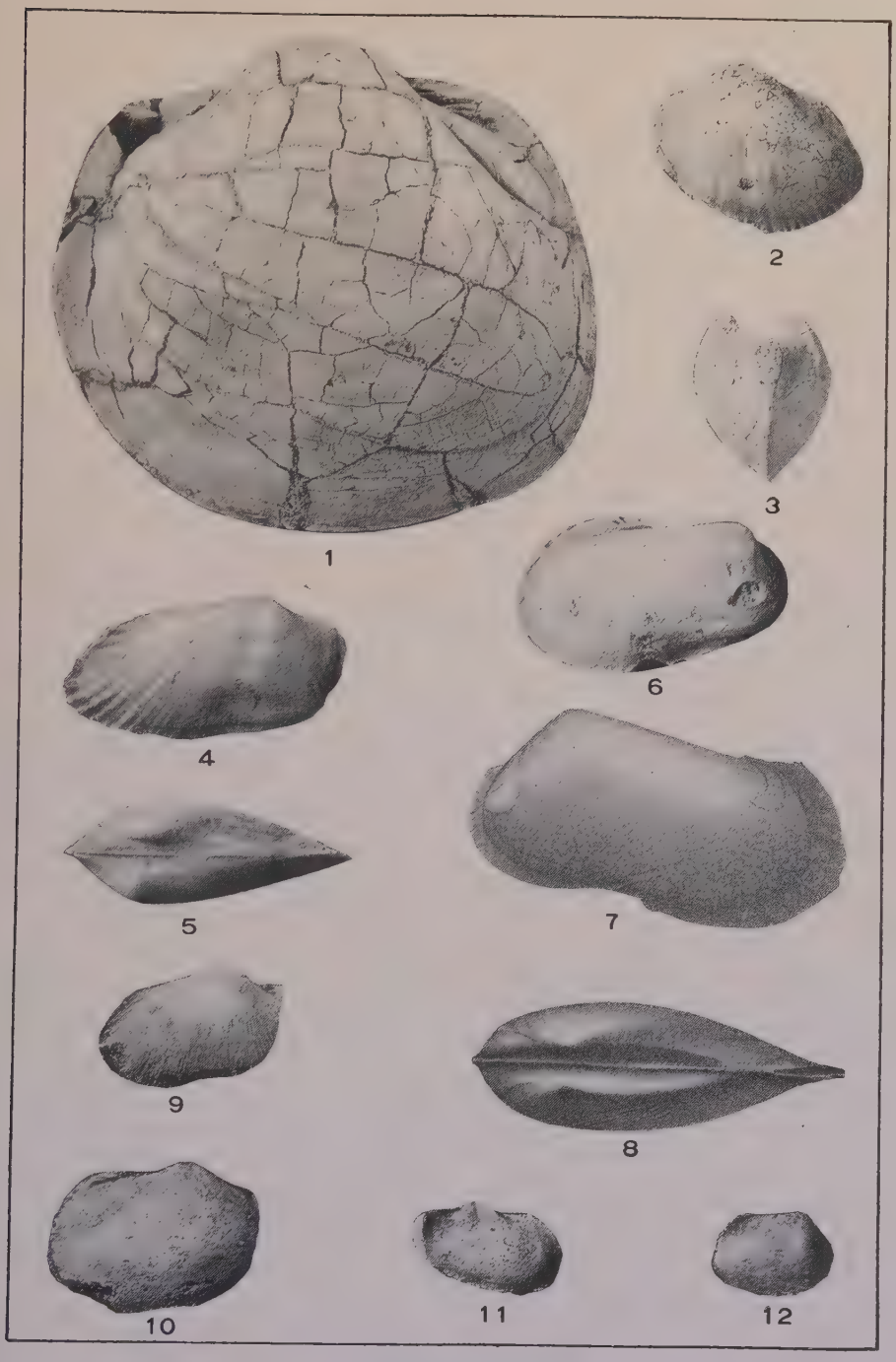
7–8. Left and dorsal views of a nearly complete internal cast. (After Whitfield.)

ARCA OBESA (Whitfield), ... p. 409

9. The internal cast of a right valve.
Merchantville clay-marl; Lenola, (163).

ARCA sp.

10–12. Views of three internal casts.
Vincentown formation; near Deal, (122).



PELECYPODA.

EXPLANATION OF PLATE XXXV.

AXINEA SUBAUSTRALIS d'Orbigny, ... p. 414

1. A large internal cast of the left valve.
   Navesink marl; Crosswicks Creek, (149).

2–3. Two internal casts of medium size with very strong teeth and crenulations of the margin.
   Tinton Beds; Beers Hill cut, (129[5]).

4–5. Two internal casts.
   Merchantville clay-marl; Lenola, (163).

6. Right side of a nearly complete individual preserving the shell, illustrated by Whitfield.
   Navesink marl; Crosswicks Creek.

7–8. Two internal casts.
   Vincentown formation; near Deal, (122).

AXINEA COMPRESSA n. sp., ... p. 417

9. The type specimen, an internal cast of a right valve.
   Red Bank sand; near Middletown, (112).

AXINEA MICRODENTUS n. sp., ... p. 416

10–11. Two internal casts.
   Wenonah sand; near Crawfords Corner, (126[3]).

AXINEA CONGESTA (Conrad), ... p. 418

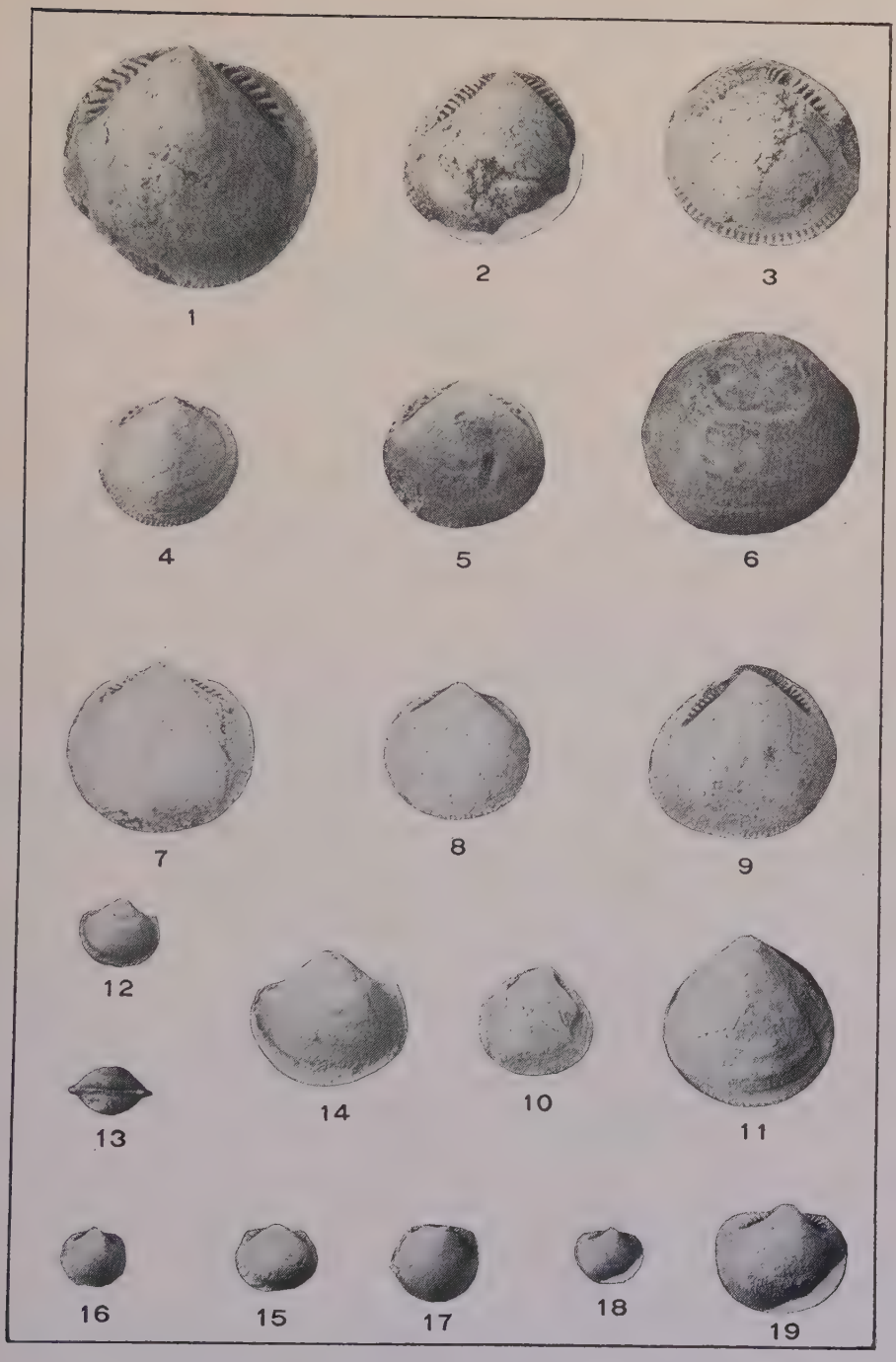
12–13. Left and dorsal views of a nearly perfect internal cast.

14. Left side of the same, (x2).
   Cliffwood Clay; near Matawan, (185).

15. Internal cast of a right valve showing the hinge.
   Cliffwood clay; Cliffwood Point, (105).

16–18. Views of the internal casts of three single valves.

19. View of same specimen shown in fig. 18, (x2).
   Woodbury clay; Lorillard, (102).



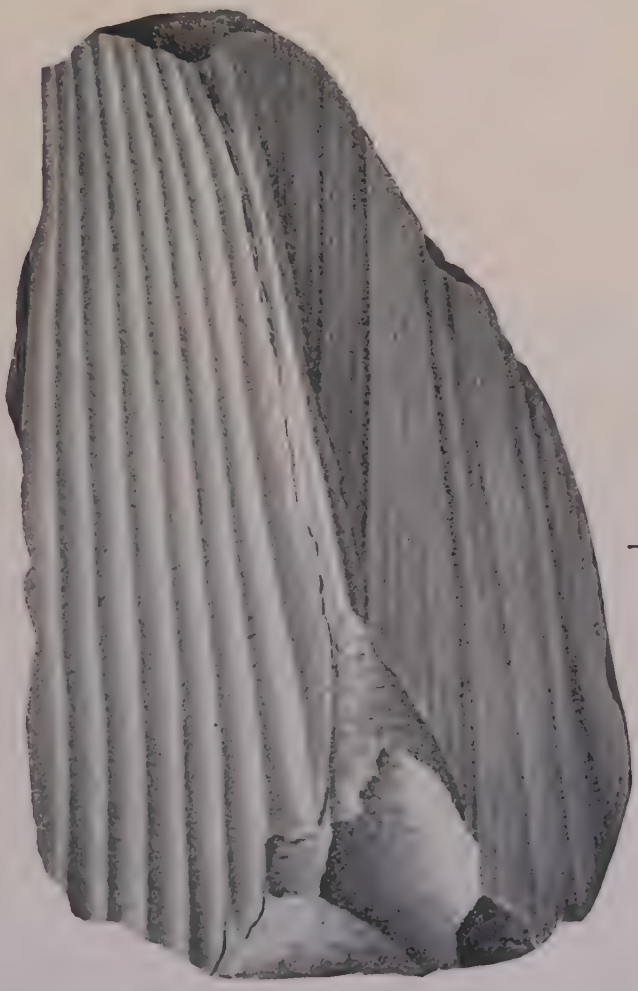
PELECYPODA.

EXPLANATION OF PLATE XXXVI.

PINNA LAQUEATA Conrad, ... p. 419

1. Lateral view of a large, imperfect, right valve. (After Whitfield.)

Merchantville clay-marl; Burlington.



PELECYPODA.

EXPLANATION OF PLATE XXXVII.

PINNA LAQUEATA Conrad, ... p. 419

1. Lateral view of a right valve, incomplete anteriorly. (After Whitfield.)

PINNA ROSTRIFORMIS Morton, ... p. 420

2–3. Lateral views of two imperfect left valves. (After Whitfield.)

Vincentown limesand; Timber Creek.

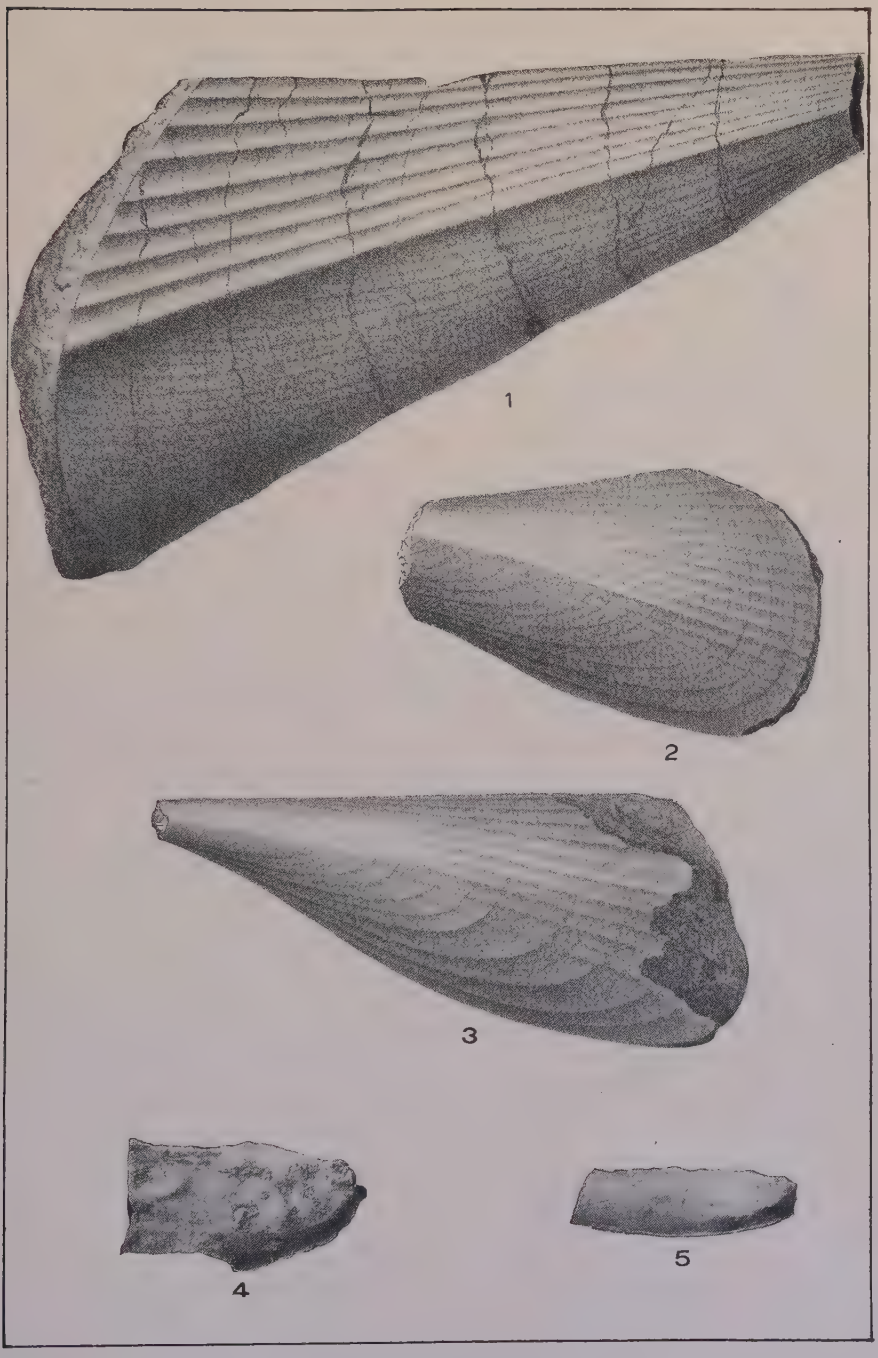
GERVILLIOPSIS ENSIFORMIS (Conrad), ... p. 421

4. View of an incomplete internal cast from the right side.

Navesink marl; near Freehold, (133).

5. A similar view of a smaller specimen.

Navesink marl; Mullica Hill, (169).



PELECYPODA.

EXPLANATION OF PLATE XXXVIII.

GERVILLIOPSIS ENSIFORMIS (Conrad), ... p. 421

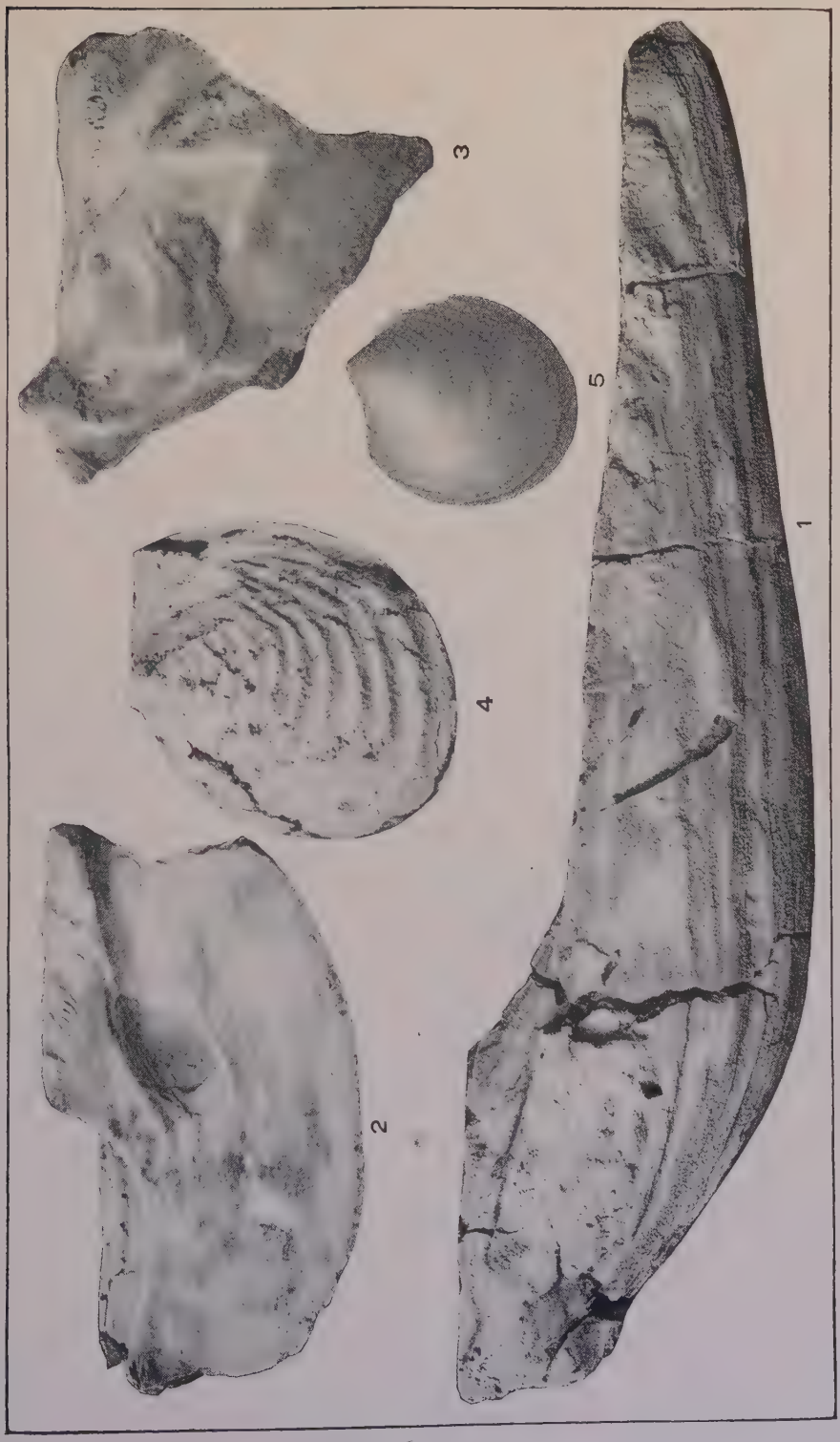
1. A nearly complete left valve.
2. Internal view of a less complete valve.
   Marshalltown clay-marl; Woodbury.
3. View of a large, imperfect internal cast.
   Marshalltown clay-marl?; Woodbury?

INOCERAMUS PROOBLIQUA Whitfield, ... p. 428

4. The type specimen.
   Navesink marl; Holmdel.

INOCERAMUS ? PEROVALIS Conrad.

5. View of the right side of an internal cast. The type specimen. (After Whitfield.)



PELECYPODA.

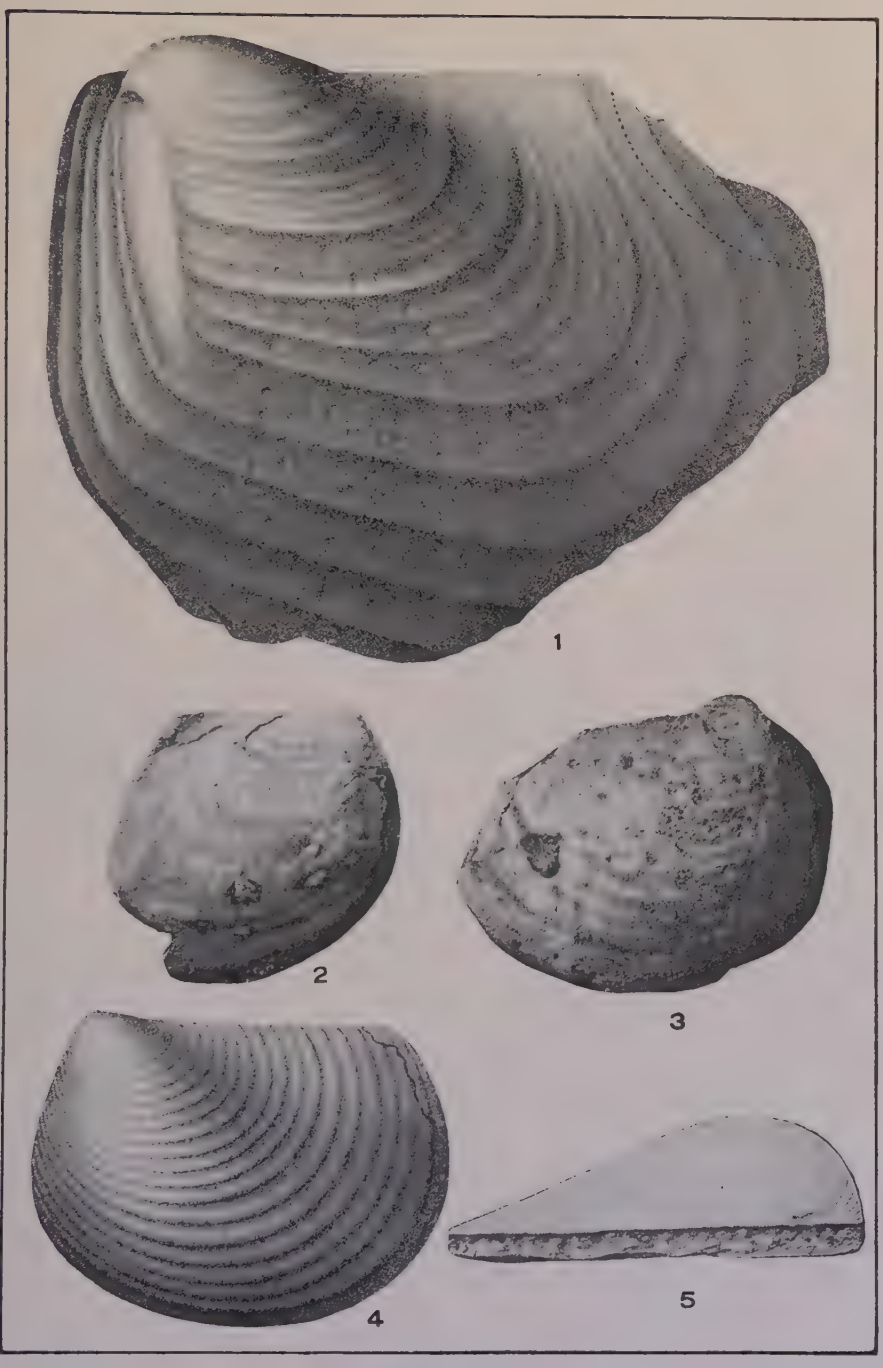
EXPLANATION OF PLATE XXXIX.

INOCERAMUS QUADRANS Whitfield, ... p. 426

1. View of the type specimen. (After Whitfield.)
Merchantville clay-marl?; near Burlington.

INOCERAMUS CONFERTIM-ANNULATUS Roemer, ... p. 427

2. View of an incomplete specimen.
Merchantville clay-marl; near Matawan, (100^3).
3. View of an incomplete specimen illustrated by Whitfield.
Navesink marl; Holmdel.
4–5. Two views of a left valve. (After Whitfield.)
Navesink marl; Marlboro.



PELECYPODA.

EXPLANATION OF PLATE XL.

INOCERAMUS PROXIMUS Tuomey, ... p. 424

1–2. Views of two incomplete specimens. (After Whitfield.)
Merchantville clay-marl; Keyport.

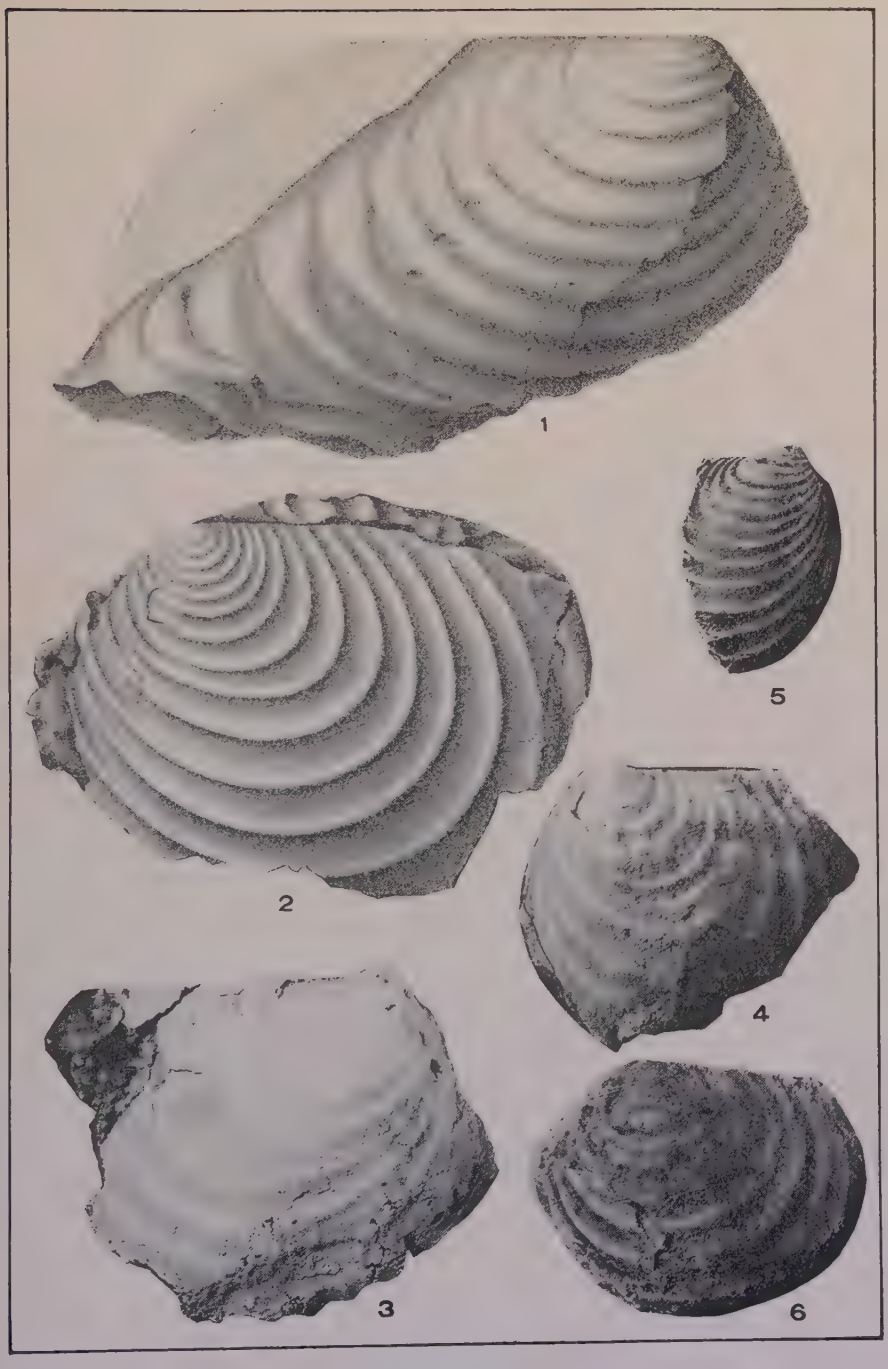
3. An incomplete specimen illustrated by Whitfield.
Wenonah sand; Holmdel.

4. View of an incomplete left valve.
Merchantville clay-marl; near Jamesburg, (*141*).

5. View of an incomplete right valve preserving the shell.
Marshalltown clay-marl; near Swedesboro, (177).

INOCERAMUS sp.

6. View of an incomplete left valve.
Navesink marl; Crosswicks Creek, (*147*[4]).



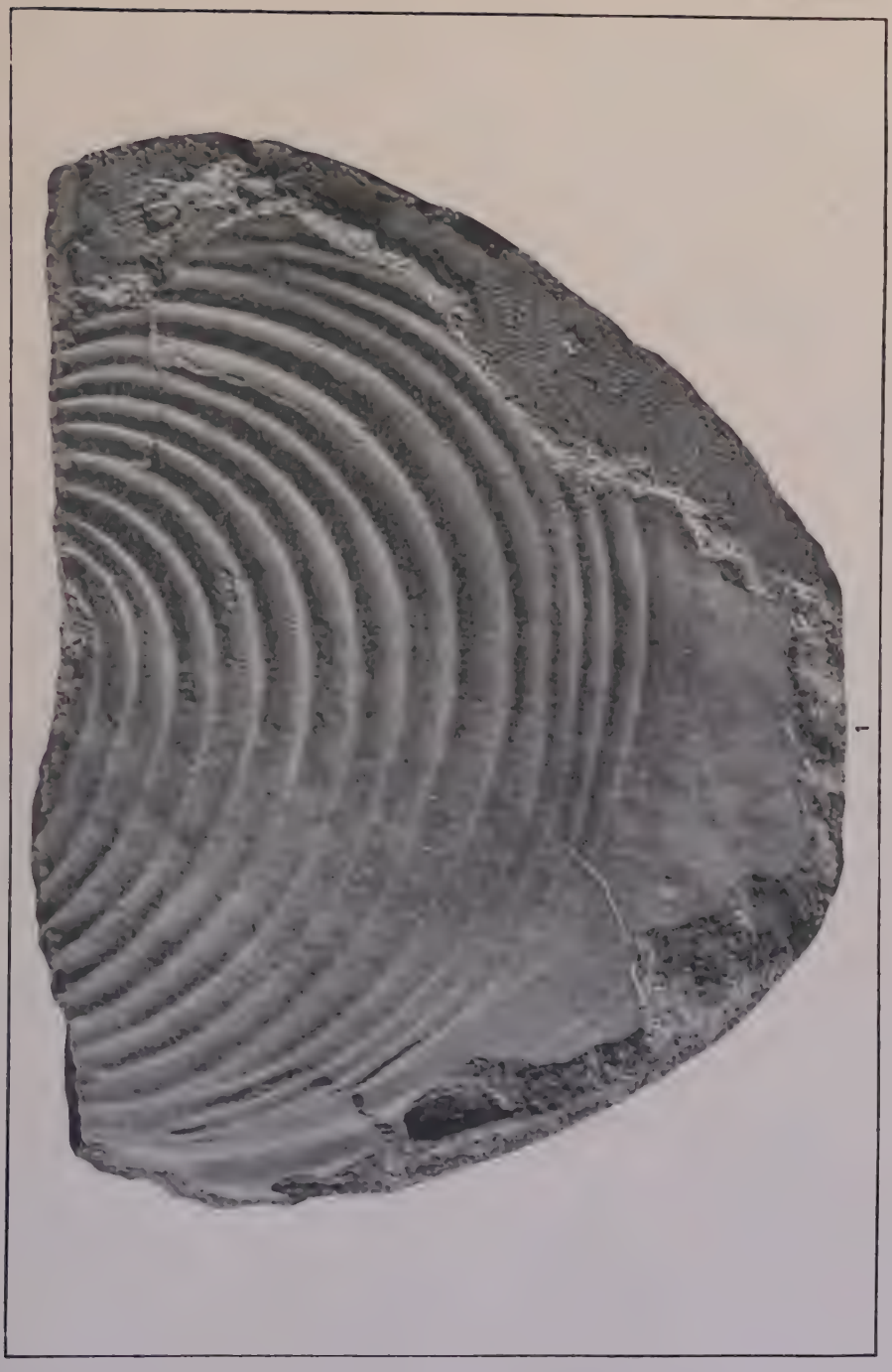
PELECYPODA.

EXPLANATION OF PLATE XLI.

INOCERAMUS PROXIMUS Tuomey, ... p. 424

1. A very large, incomplete specimen.

Merchantville clay-marl; Lenola, (163).



PELECYPODA.

EXPLANATION OF PLATE XLII.

PTERIA PETROSA (Conrad), ... p. 429

1. A complete internal cast of the right valve.
Cliffwood clay; near Matawan, (189).

2. An incomplete internal cast of a left valve.
Wenonah sand; near Marlboro, (130).

PTERIA LARIPES (Morton), ... p. 431

3. View of a left valve. (After Whitfield.)

PTERIA NAVICULA Whitfield, ... p. 432

4. View of the type specimen. (After Whitfield.)
Woodbury clay; Haddonfield, (183).

MELEAGRINELLA ABRUPTA (Conrad), ... p. 433

5–6. Views of two internal casts, a left valve and a right valve.
Navesink marl; near Holmdel, (128[3]).

7–8. Internal and external views of a nearly complete right valve, (x2). (After Whitfield.)

9. The hinge of a left valve, (x2). (After Whitfield.)
Navesink marl; Freehold.

OSTREA PANDA Morton, ... p. 437

10. View of a nearly perfect lower valve.
Marshalltown clay-marl; near Swedesboro, (180).

OSTREA CRETACEA Morton, ... p. 434

11. A nearly complete internal cast of the lower valve.
Cliffwood clay; Cliffwood Point (105).

OSTREA CRENULIMARGINATA Gabb, ... p. 441

12–13. External and internal views of a complete single valve, illustrated by Whitfield.
Navesink marl; Marlboro.

OSTREA sp.

14. View of an internal cast of a lower valve.
Vincentown sand; near Deal, (122).

OSTREA SUBSPATULATA Forbes, ... p. 440

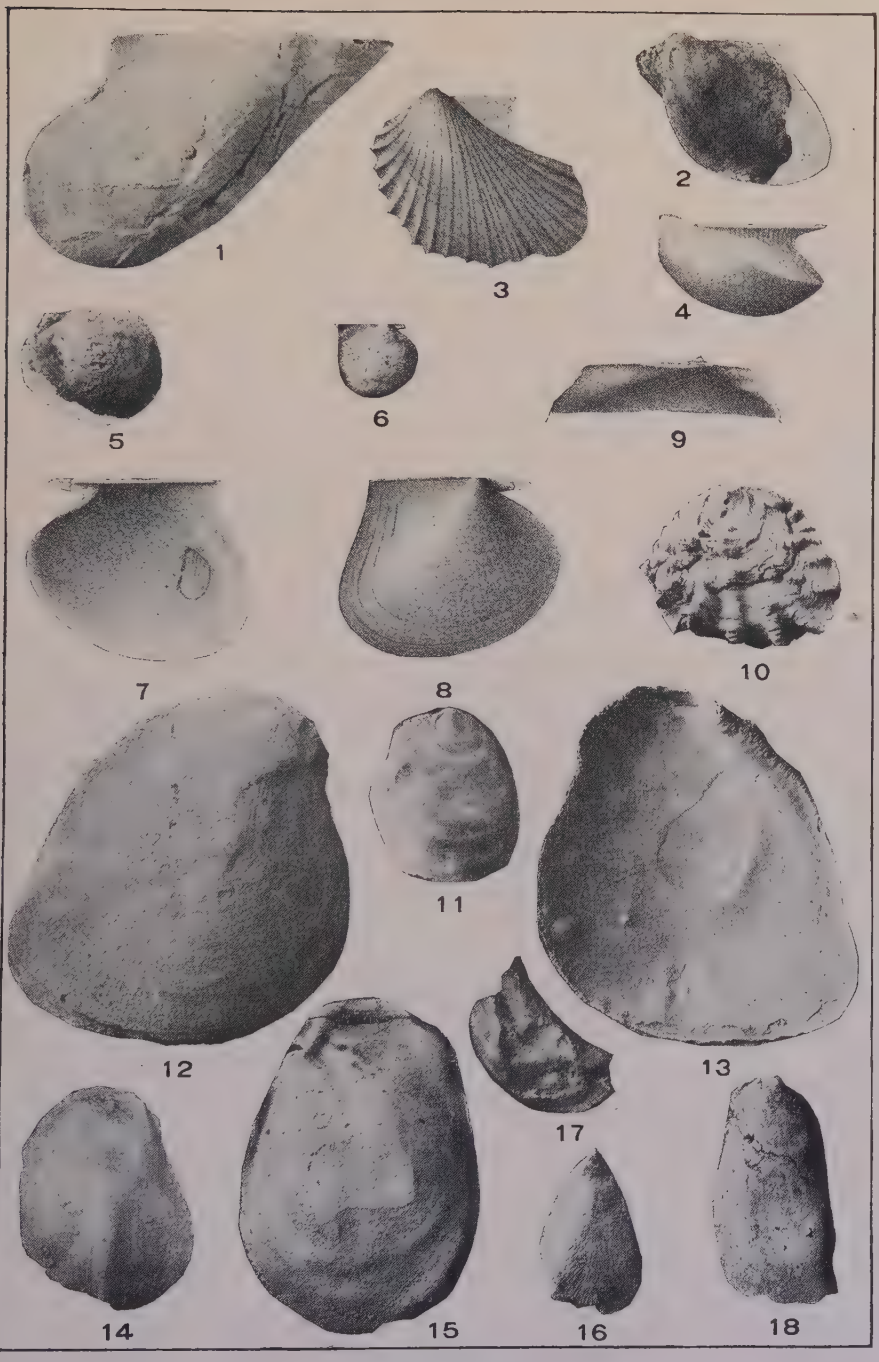
15. View of an internal cast of a lower valve.
Wenonah sand; Crawfords Corner (126[3]).

OSTREA PLUMOSA Morton, ... p. 439

16. An upper valve preserving the shell.

17. A lower valve supposed to belong to this species.
Marshalltown clay-marl; near Swedesboro, (177).

18. Internal cast of a lower valve.
Wenonah sand; Crawfords Corner (126[3]).



PELECYPODA.

EXPLANATION OF PLATE XLIII.

OSTREA DENTICULIFERA Conrad, ... p. 436

1–2. Internal and external views of two nearly complete valves, identified by Conrad. (After Whitfield.)

Woodbury clay; Haddonfield, (183).

OSTREA FALCATA Morton, ... p. 444

3–6. Views of four nearly perfect single valves.

Marshalltown clay-marl; near Swedesboro, (177).

OSTREA NASUTA Morton. ..... p. 447

7–8. Views of two nearly complete single valves. (After Whitfield.)

Navesink marl.

OSTREA MESENTERICA Morton, ... p. 446

9–14. Views of six nearly perfect single valves.

Navesink marl; near Holmdel, (127[5]).

OSTREA MONMOUTHENSIS n. sp., ... p. 442

15. View of the type specimen.

Navesink marl; near Crawfords Corner, (126[7]).

OSTREA CONGESTA Conrad, ... p. 435

16. View of an internal cast of the attached valve.

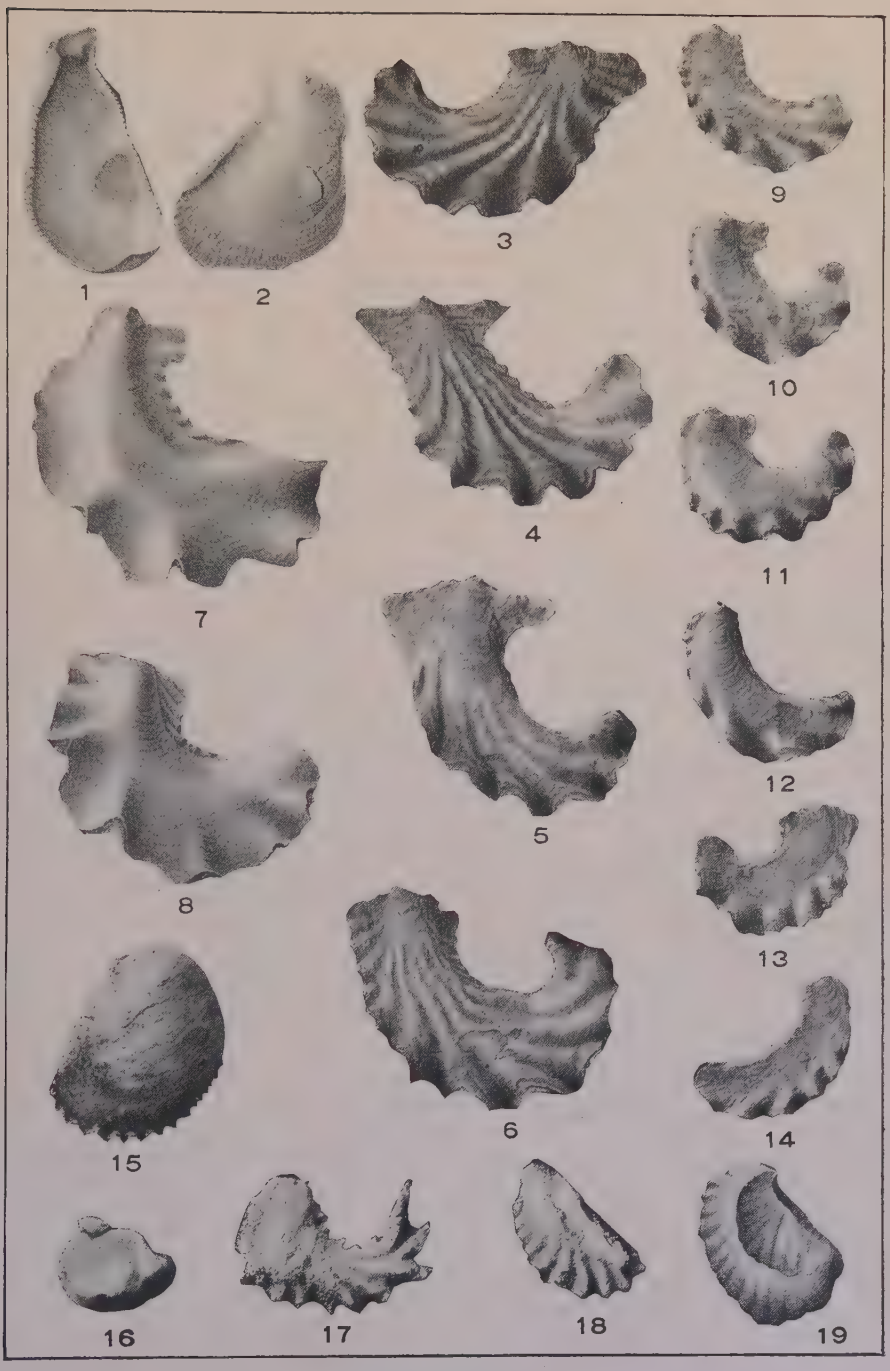
Cliffwood clay; Cliffwood Point, (105).

OSTREA TECTICOSTA Gabb, ... p. 443

17–18. Views of two casts of single valves referred to this species.

Wenonah sand; near Marlboro, (130).

19. Exterior view of the type specimen. (After Whitfield.)



PELECYPODA.

EXPLANATION OF PLATE XLIV.

OSTREA BRYANA Gabb, ... p. 448

1–2. Views of two lower valves.

3. View of the upper side of a complete individual.

4. View of the interior of an upper valve.

Manasquan marl; near Vincentown, (159).

5. An internal cast.

Manasquan marl; Farmingdale, (138).

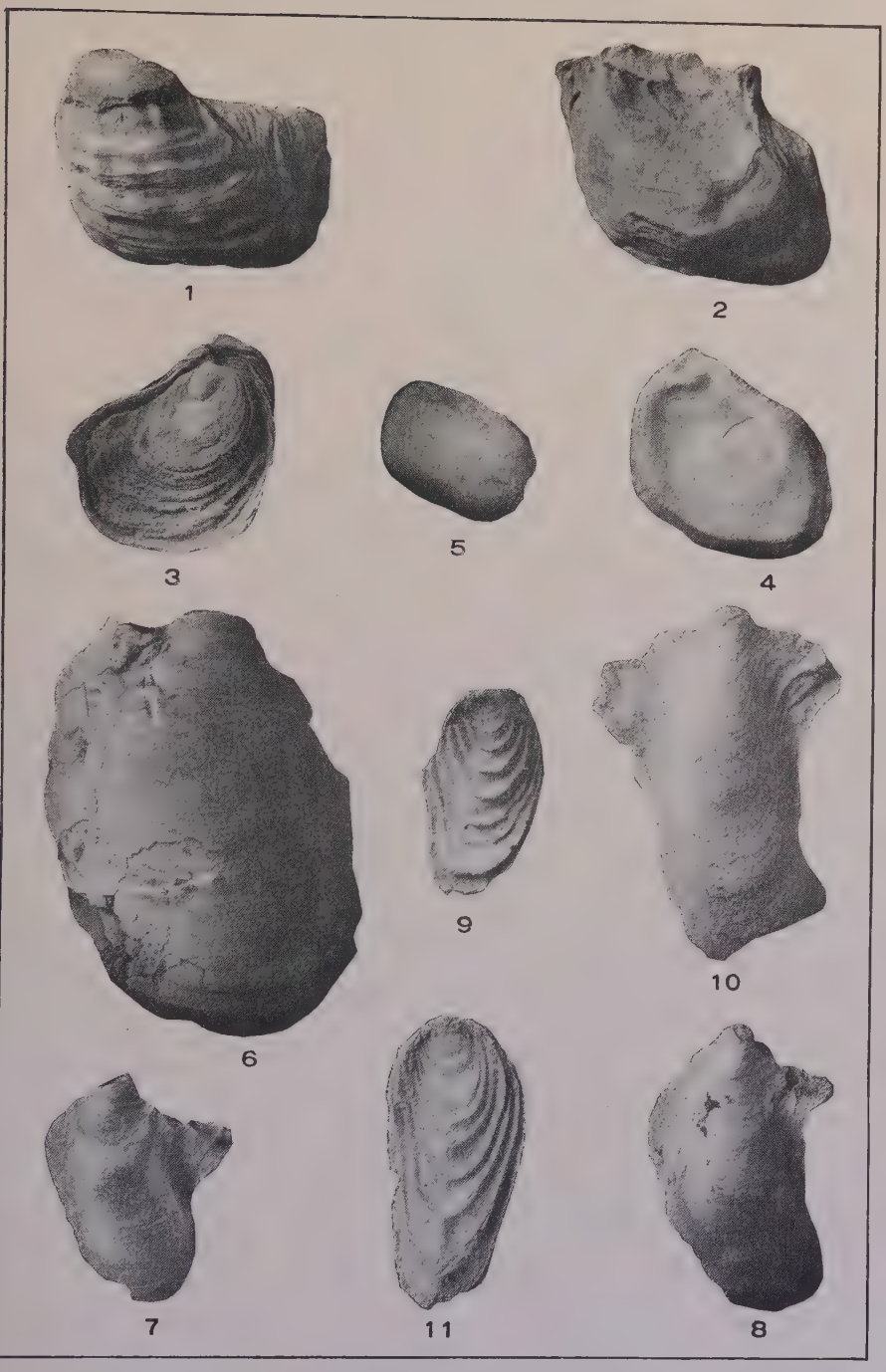
GRYPHAEOSTREA VOMER (Morton), ... p. 455

6–9. Views of three lower valves of different forms, and one upper valve.

Marshalltown clay-marl; near Swedesboro, (177).

10–11. Views of a lower and an upper valve.

Hornerstown marl; near Woodstown, (181).



PELECYPODA.

EXPLANATION OF PLATE XLV.

GRYPHAEA CONVEXA (Say), ... p. 451

1–2. Views of the opposite sides of a specimen retaining both valves.

Navesink marl; Middletown, (113).

1

2

PELECYPODA.

EXPLANATION OF PLATE XLVI.

GRYPHAEA MUTABILIS Morton, ... p. 452

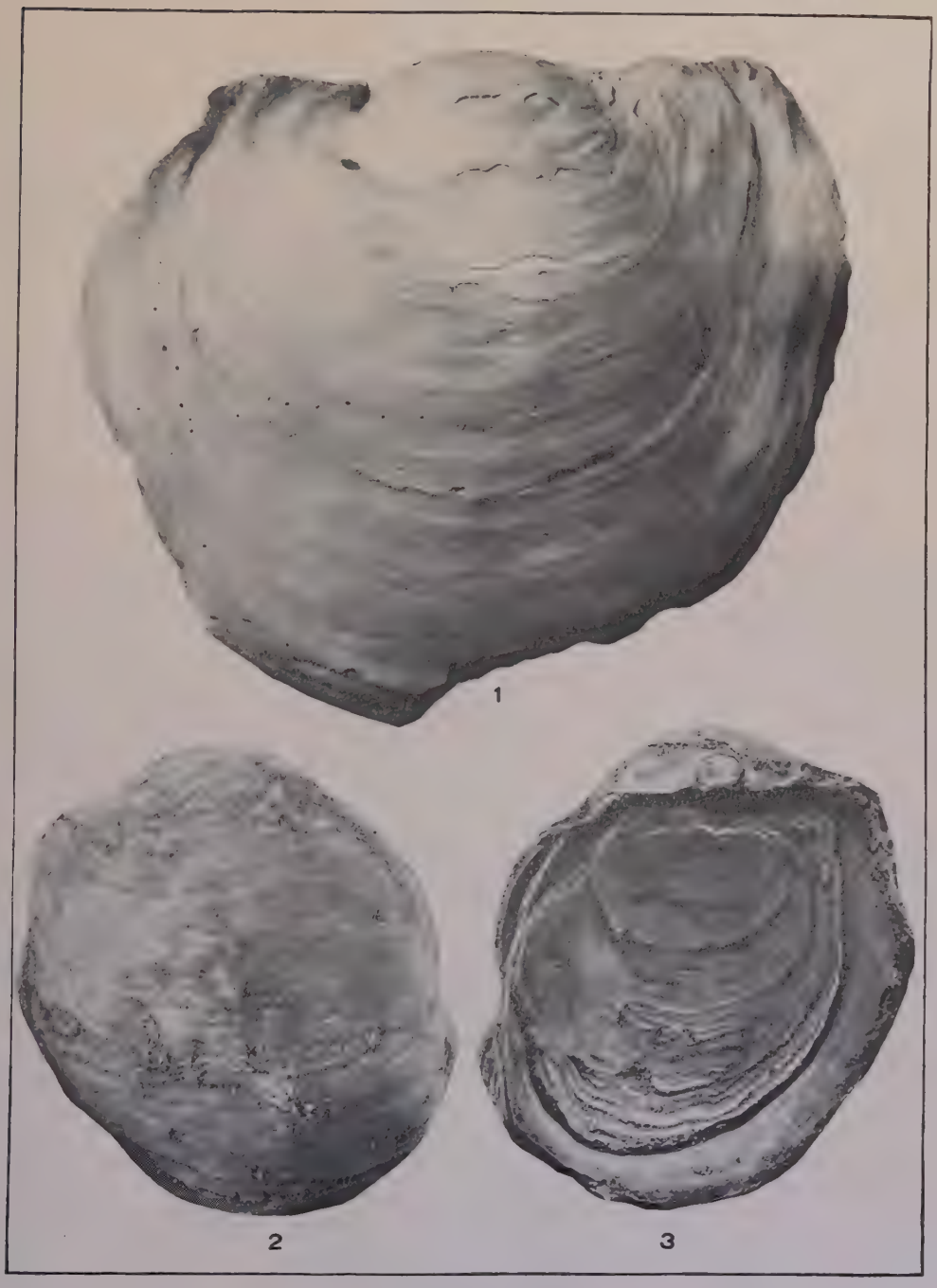
1. External view of a nearly complete valve.

Marshalltown clay-marl; near Swedesboro, (180).

GRYPHAEA DISSIMILARIS n. sp., ... p. 453

3–4. Two views of a nearly complete individual retaining both valves.

Hornerstown marl; near Woodstown, (181).



PELECYPODA.

EXPLANATION OF PLATE XLVII.

EXOGYRA COSTATA Say, ... p. 456

1. View of a nearly perfect valve.
Navesink marl; Crosswicks Creek, (146²).

EXOGYRA PONDEROSA Roemer, ... p. 458

2. View of a nearly perfect valve.
Marshalltown clay-marl; near Swedesboro, (177).

EXOGYRA sp., ... p. 460

3. View of an internal cast of a lower valve.
Merchantville clay-marl; Lenola, (163).

OSTREA CONGESTA Con., ... p. 435

4. View of the internal cast of an attached valve.
Cliffwood clay; Cliffwood Point, (105).

PELECYPODA.

EXPLANATION OF PLATE XLVIII.

TRIGONIA THORACICA Morton, ... p. 460

1–2. Views of a left and a right valve.
Marshalltown clay-marl; near Swedesboro, (177).

3–4. Two views of an internal cast. The type of *T. mortoni* Whitf.
Navesink marl; Freehold.

TRIGONIA EUFAULENSIS Gabb, ... p. 462

5. View of an internal cast.
Wenonah sand; near Marlboro, (130).

6. View of an internal cast.
Merchantville clay-marl; Lenola, (163).

7–8. Two views of a complete individual from Alabama. (Coll. U. S. Nat. Mus.)

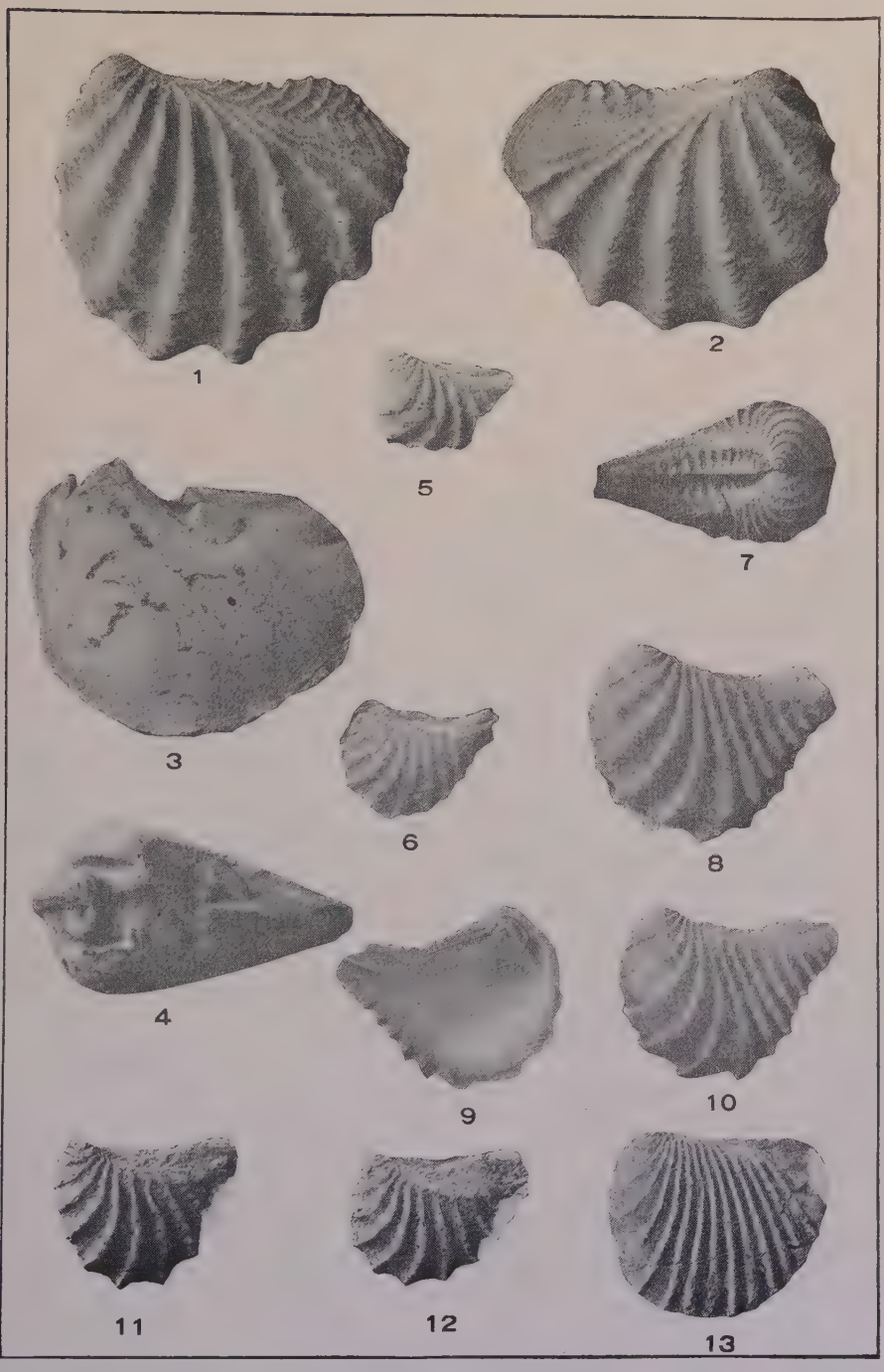
9–10. Internal and external views of a left valve from Alabama. (Coll. U. S. Nat. Mus.)

TRIGONIA KUMMELI n. sp., ... p. 466

11–12. Views of two left valves, plaster casts taken from natural moulds of the exterior.
Red Bank sand; Shrewsbury River, (116).

TRIGONIA CERULIA Whitfield, ... p. 464

13. View of a left valve from the type locality.
Tinton beds; Beers Hill Cut, (129°).



PELECYPODA.

EXPLANATION OF PLATE XLIX.

PECTEN ARGILLENSIS Conrad, ... p. 472

1–2. Views of two nearly circular individuals illustrated by Whitfield.

Navesink marl; Freehold.

3–4. Views of two individual valves of normal form and size. Internal casts.

Woodbury clay; Lorillard, (102).

PECTEN BURLINTONENSIS Gabb, ... p. 470

5. A large internal cast of a single valve.

6. A small single valve of the form called *P. perlamellosus* by Whitfield.

Merchantville clay-marl; near Matawan, (101).

7–8. A cast of the interior and the natural impression of the exterior of a single valve.

Merchantville clay-marl; Lenola, (163).

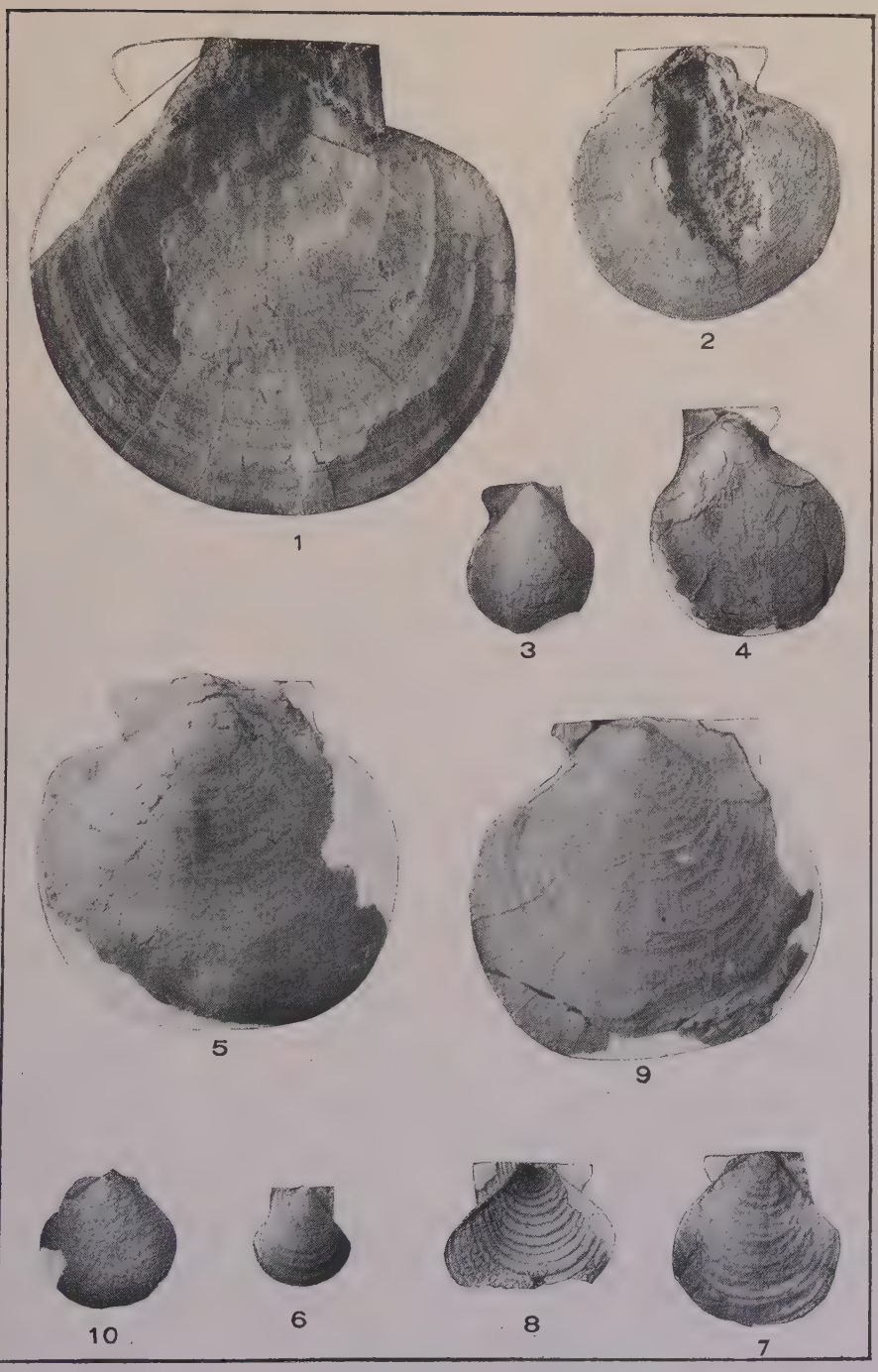
9. A large internal cast of a single valve.

Woodbury clay; Lorillard, (102).

PECTEN sp.

10. View of an internal cast.

Manasquan marl; Farmingdale, (138).



PELECYPODA.

EXPLANATION OF PLATE L.

PECTEN CONRADI (Whitfield), ... p. 474

1–3. Views of the internal casts of three single valves.

4. The internal cast of one valve and the impression of the exterior of another.

Woodbury clay; Lorillard, (102).

PECTEN PARVUS (Whitfield), ... p. 477

5. View of the type specimen, (x2).

6. View of the surface markings, (much enlarged).

Navesink marl; Freehold.

PECTEN CLIFFWOODENSIS n. sp., ... p. 469

7–8. Views of two internal casts of single valves. The type specimens.

Cliffwood clay; Cliffwood Point, (105).

PECTEN TENUITESTUS Gabb, ... p. 467

9. View of a squeeze taken from a natural mould of the exterior.

Navesink marl; near Walnford, (149).

PECTEN QUINQUENARIA Conrad, ... p. 476

10–12. Views of three imperfect internal casts of separate valves.

Wenonah sand; near Marlboro, (130).

13. A nearly complete individual preserving the shell, from near Dumas, Mississippi. (Coll. U. S. Nat. Mus., No. 20723.)

PECTEN WHITFIELDI n. sp., ... p. 468

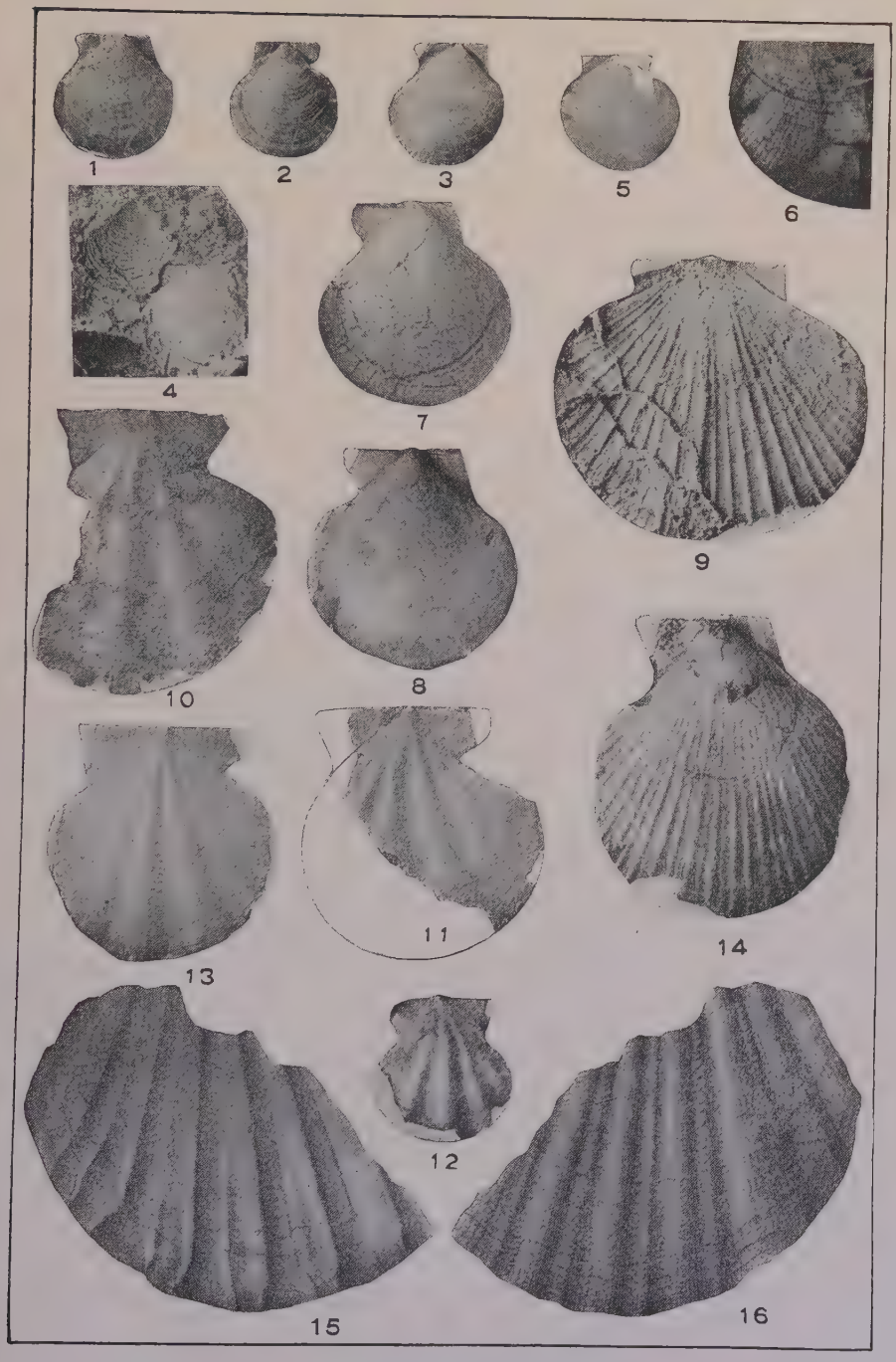
14. View of the type specimen, figured by Whitfield as *P. tenuitestus* Gabb.

Navesink marl; Holmdel.

PECTEN CRATICULUS Morton, ... p. 478

15–16. Two views of the type specimen. (After Whitfield.)

Navesink marl; Arneytown.



PELECYPODA.

EXPLANATION OF PLATE LI.

PECTEN VENUSTUS Morton, ... p. 478

1–2. The internal and external surfaces of a natural mould of a single valve, (x2).

3. The same impression of the exterior, (x6).
Tinton beds; Tinton Falls, (110).

4. An internal cast of a single valve.
Red Bank sand; Red Bank, (116).

5. An internal cast illustrated by Whitfield.
Navesink marl.

PECTEN SIMPLICIUS Conrad, ... p. 480

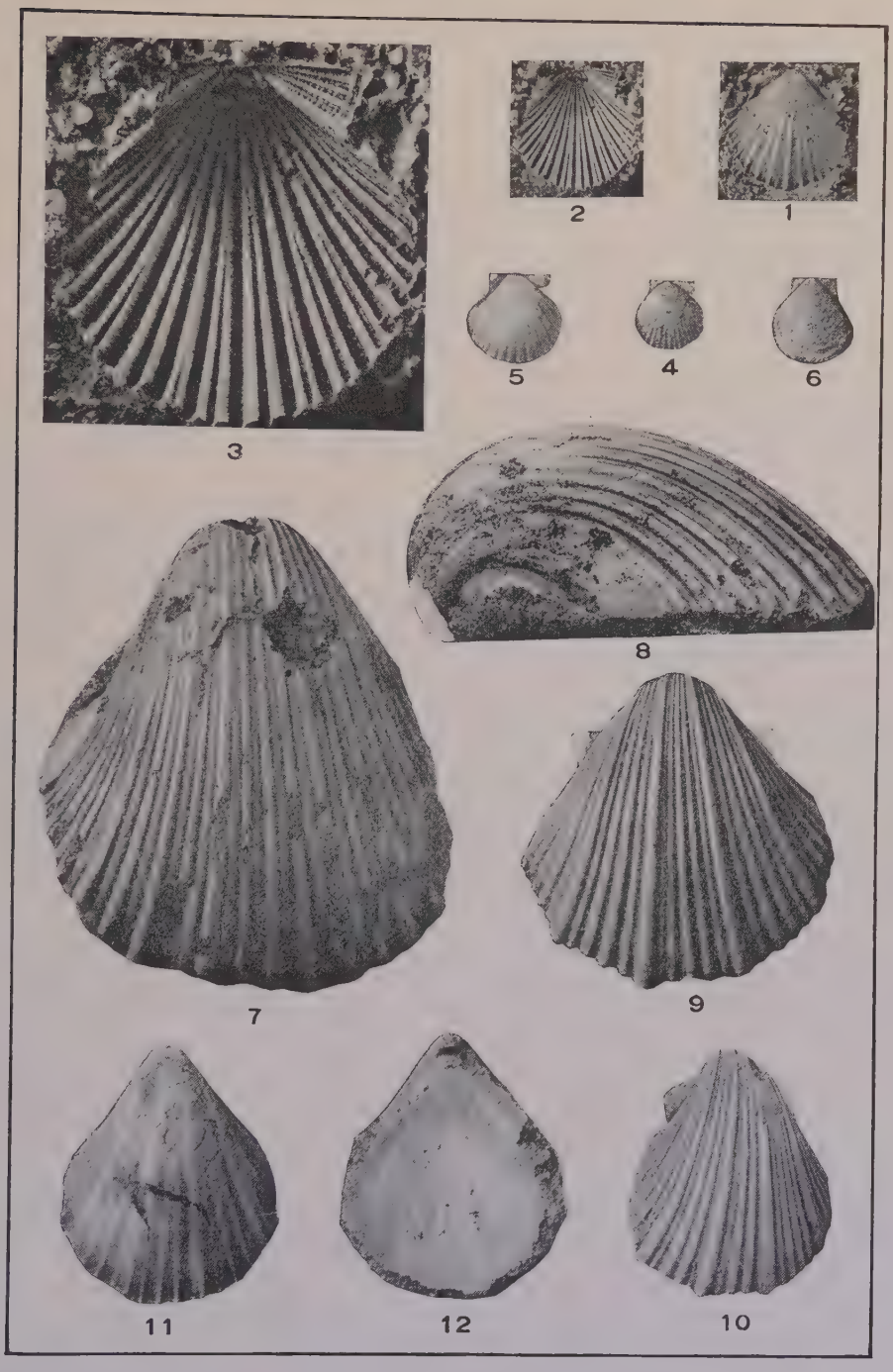
6. An internal cast of a single valve.
Tinton beds; Beers Hill Cut, (129[5]).

NEITHEA QUINQUECOSTATA (Sowerby), ... p. 481

7–8. Two views of a large internal cast of the convex valve. Illustrated by Whitfield.
Wenonah sand.

9–10. Two convex valves preserving the shell.
Marshalltown clay-marl; near Swedesboro, (177).

11–12. Upper and lower views of a nearly complete internal cast.
Merchantville clay-marl; Lenola, (163).



PELECYPODA.

EXPLANATION OF PLATE LII.

PLICATULA URTICOSA (Morton), ... p. 484

1–2. Views of two individuals. (After Whitfield.)

Navesink marl; Freehold.

PLICATULA MULLICAENSIS n. sp., ... p. 485

3. View of a natural mould of the exterior of an upper valve.

4. A squeeze taken from the same.

5. A much exfoliated upper valve.

Navesink marl; Mullica Hill, (169).

LIROSCAPHA SQUAMOSA Conrad, ... p. 489

6–7. Two views of the type specimen, (x2).

Woodbury clay; Haddonfield, (183).

PLICATULA WOODBURYENSIS n. sp., ... p. 485

8. View of a natural mould of the exterior of an upper valve.

9. A squeeze taken from the same.

Woodbury clay; Lorillard, (102).

PARANOMIA SCABRA (Morton), ... p. 500

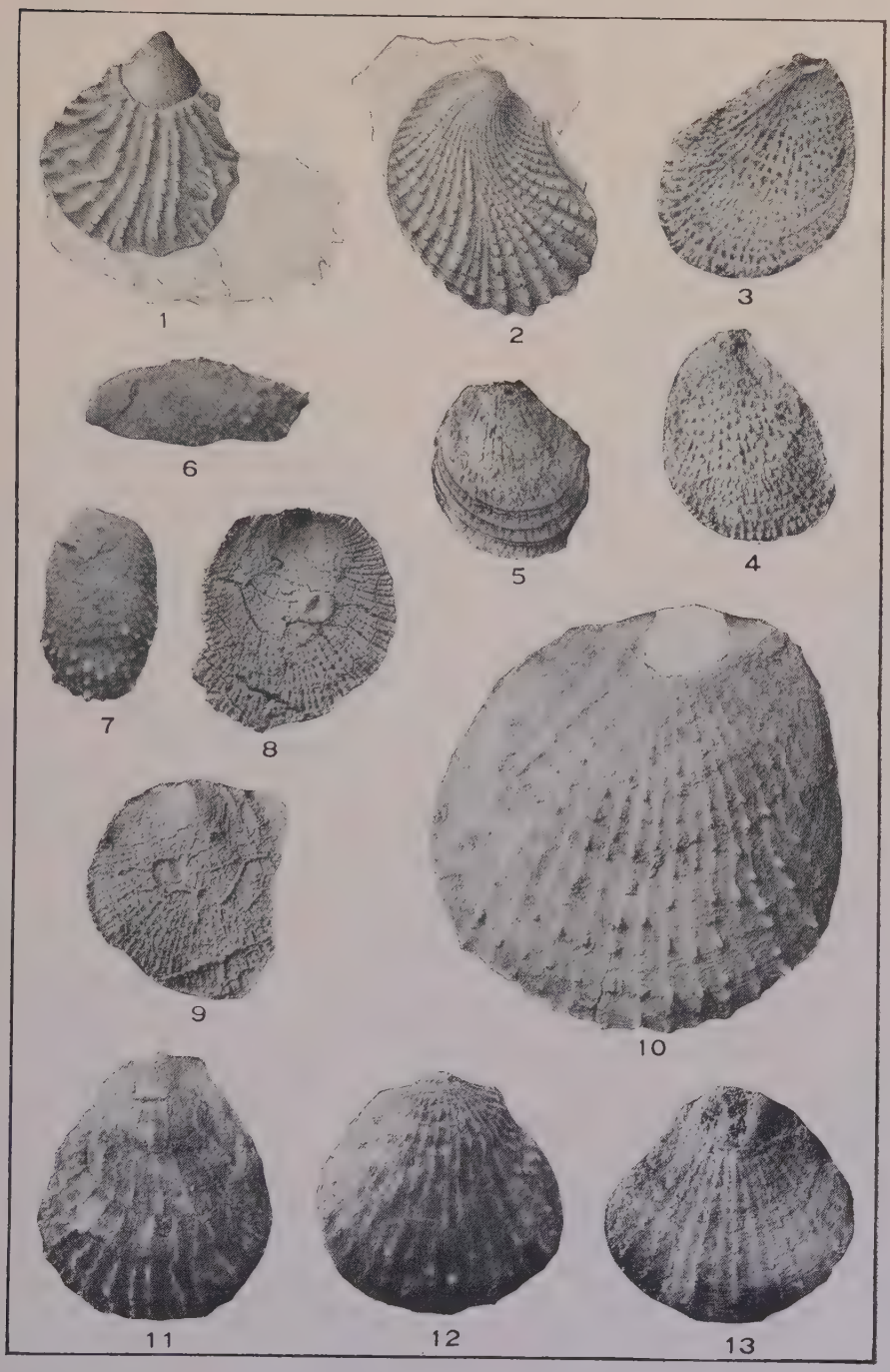
10. View of a large single valve illustrated by Whitfield.

Navesink marl; Upper Freehold.

11–12. Two upper valves.

13. A lower valve.

Marshalltown clay-marl; near Swedesboro, (177).



PELECYPODA.

EXPLANATION OF PLATE LIII.

SPONDYLUS GREGALIS (Morton), ... p. 486

1–2. Internal and external views of a large lower valve illustrated by Whitfield.

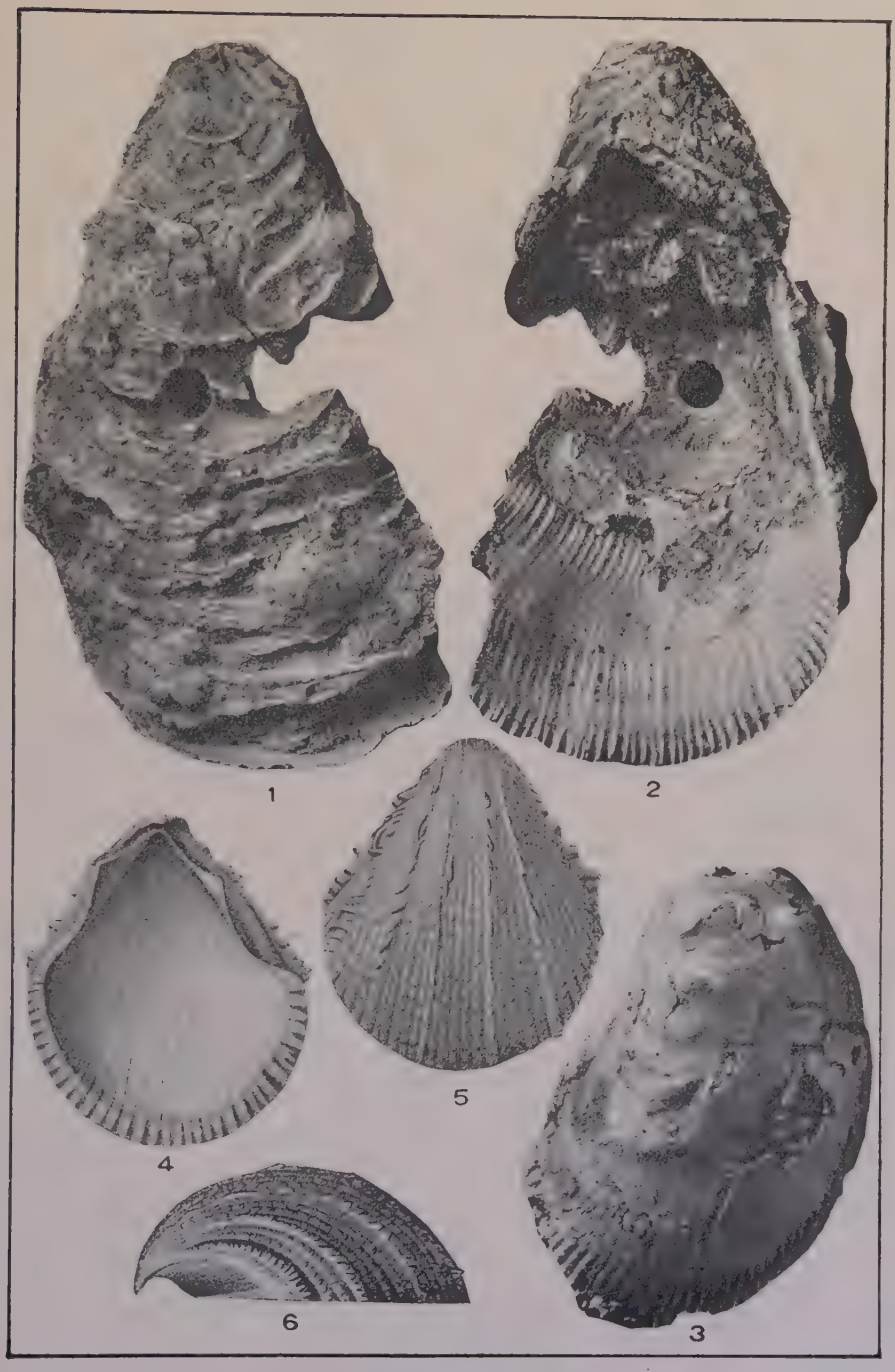
3. View of an internal cast illustrated by Whitfield.

Navesink marl; Crosswicks Creek.?

DIANCHORA ECHINATA (Morton), ... p. 487

4–6. Three views of the type specimen, a nearly perfect lower valve. (After Whitfield).

Navesink marl.



PELECYPODA.

EXPLANATION OF PLATE LIV.

DIANCHORA ECHINATA (Morton), ... p. 487

1. The interior of a lower valve attached to the inside of a *Gryphaea* shell.
2. View of the hinge extremity of an individual attached to the interior of a *Gryphaea* shell, showing the convex outline of the cast of the upper valve.

Navesink marl.

LIMA RETICULATA (Lyell and Forbes), ... p. 492

3. A right valve preserving the shell.

Marshalltown clay-marl; near Swedesboro, (177).

4. The internal cast of a right valve.

Navesink marl; near Walnford, (149).

LIMA LORILLARDENSIS n. sp., ... p. 492

5. The left side of a crushed internal cast.
6. Squeeze from the impression of the exterior of the same.

Woodbury clay; Lorillard, (102).

LIMA PELAGICA (Morton), ... p. 489

7. A nearly complete left valve.

Navesink marl; near Walnford, (147[4]).

LIMA WHITFIELDI n. sp., ... p. 491

8. A very perfect right valve, illustrated by Whitfield as *Radula pelagica.*

Navesink marl; near Holmdel.

LIMA MONMOUTHENSIS (Whitfield), ... p. 494

9. View of the type specimen, illustrated by Whitfield as *Nucula monmouthensis.*

Wenonah sand; Marlboro.

PLAGIOSTOMA ERECTA (Whitfield), ... p. 495

10. View of a right valve preserving the shell.

Marshalltown clay-marl; near Swedesboro, (177).

ANOMIA ARGENTARIA Morton, ... p. 496

11. A cast of the interior of the upper valve.

Cliffwood clay; Cliffwood Point, (105).

12. A specimen retaining the shell. Illustrated by Whitfield.

Navesink marl; Freehold.

13–14. Two views of a complete internal cast, the lower side showing the position of the perforation of the valve.

Merchantville clay-marl; Lenola, (163).

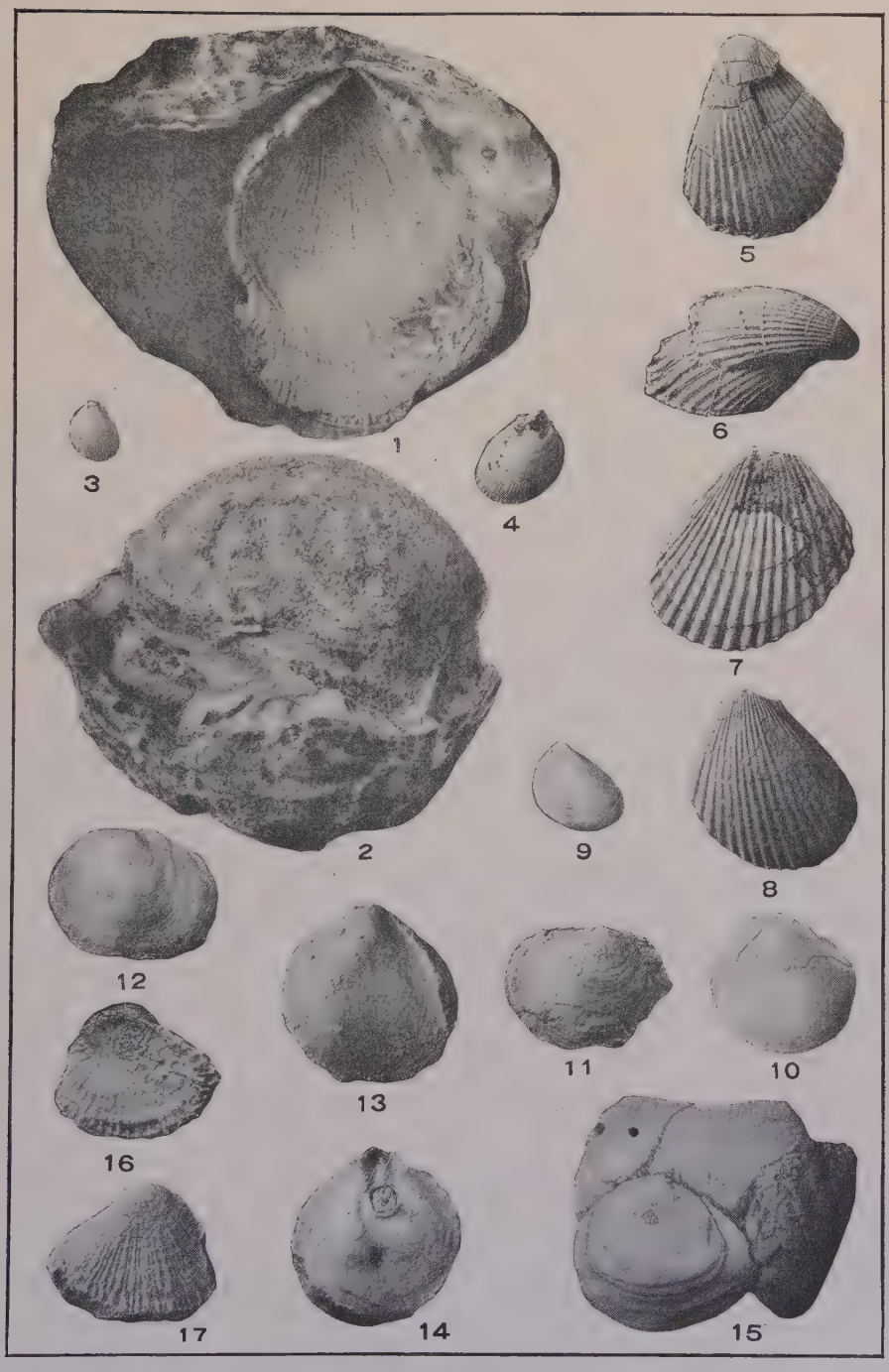
15. A group of specimens, retaining the shells. Illustrated by Whitfield as *A. tellinoides.*

Navesink marl; Freehold.

ANOMIA RADIATA n. sp., ... p. 499

16–17. Two views of the type specimen, a nearly complete internal cast. The view of the under side shows the position of the perforation of the valve.

Woodbury clay; Lorillard, (102).



PELECYPODA.

EXPLANATION OF PLATE LV.

MYTILUS SMOCKI n. sp., ... p. 502

1–2. Two views of a complete internal cast which retains some fragments of the shell.

Navesink marl; near Walnford, (149).

3–4. Two views of another complete internal cast.

Navesink marl; near Crawfords Corner, (126[T]).

MYTILUS OBLIVIUS Whitfield, ... p. 503

5. The type specimen illustrated by Whitfield.

Wenonah sand; near Marlboro.

6. View of the internal cast of a left valve.

Wenonah sand; near Marlboro, (130).

7–8. Views of the internal casts of two left valves doubtfully referred to this species.

Cliffwood clay; Cliffwood Point, (105).

MODIOLA MONMOUTHENSIS n. sp., ... p. 504

9–10. Views of two left valves. Internal casts.

Merchantville clay-marl; near Matawan, (101).

MODIOLA WENONAH n. sp., ... p. 507

11. View of the type specimen.

Wenonah sand; near Marlboro, (130).

MODIOLA JULIA Lea, ... p. 506

12–13. Views of two specimens, a right valve and a left valve.

Woodbury clay; Lorillard, (102).

MODIOLA JOHNSONI Whitfield, ... p. 509

14–15. Two views, lateral and cardinal, of the type specimen. (After Whitfield.)

Manasquan marl; Farmingdale.

MODIOLA OVATA Gabb, ... p. 508

16. Lateral view of a specimen imperfect posteriorly. (After Whitfield.)

17. View of the right side of the type specimen. (After Whitfield.)

Vincentown formation; Timber Creek.

MODIOLA BURLINGTONENSIS Whitfield, ... p. 505

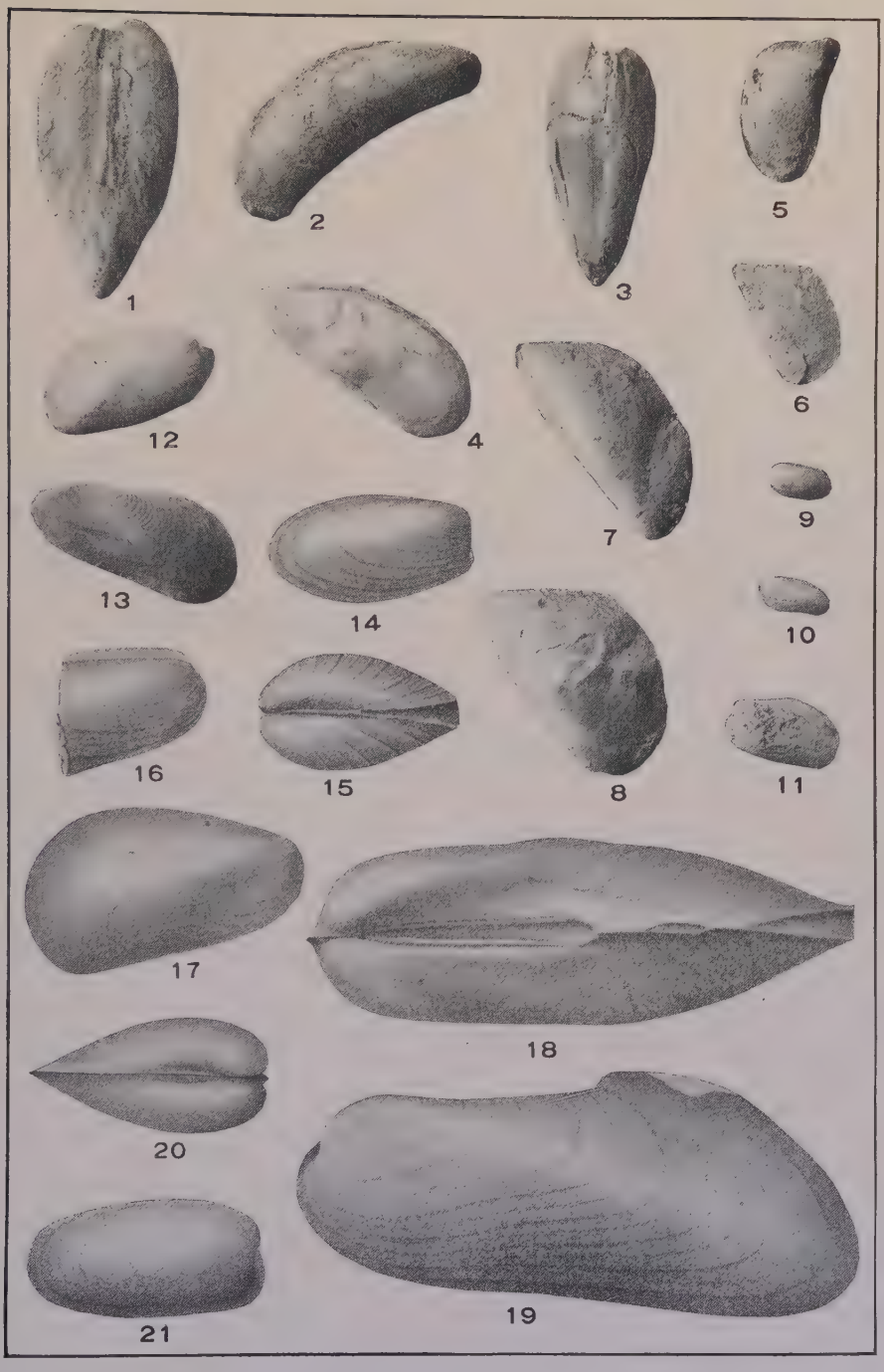
18–19. Cardinal and lateral views of the type specimen. (After Whitfield.)

Merchantville clay-marl; Burlington.

MODIOLA SUBINFLATA Whitfield, ... p. 507

20–21. Cardinal and lateral views of the type specimen, (x2). (After Whitfield.)

Hornerstown marl; near Mullica Hill.



PELECYPODA.

EXPLANATION OF PLATE LVI.

PHOLADOMYA OCCIDENTALIS Morton, ... p. 513

1–3. Anterior, lateral and cardinal views of a nearly complete internal cast.

Merchantville clay-marl; Lenola, (163).

PHOLADOMYA ROEMERI Whitfield, ... p. 515

4. Lateral view of the type specimen.

Wenonah sand; near Marlboro.

5. Lateral view of a smaller individual.

Wenonah sand; near Marlboro, (130).

CRENELLA ELEGANTULA Meek and Hayden, ... p. 511

6. Lateral view of an internal cast.

Tinton beds; Beers Hill Cut, (129[5]).

CRENELLA SERICA Conrad, ... p. 510

7–8. Lateral views of two single valves, (x2).

Marshalltown clay-marl; near Swedesboro, (177).

LITHOPHAGA RIPLEYANA (Gabb), ... p. 512

9–10. Lateral and cardinal views of a rather smooth example.

Navesink marl; Mullica Hill, (169).

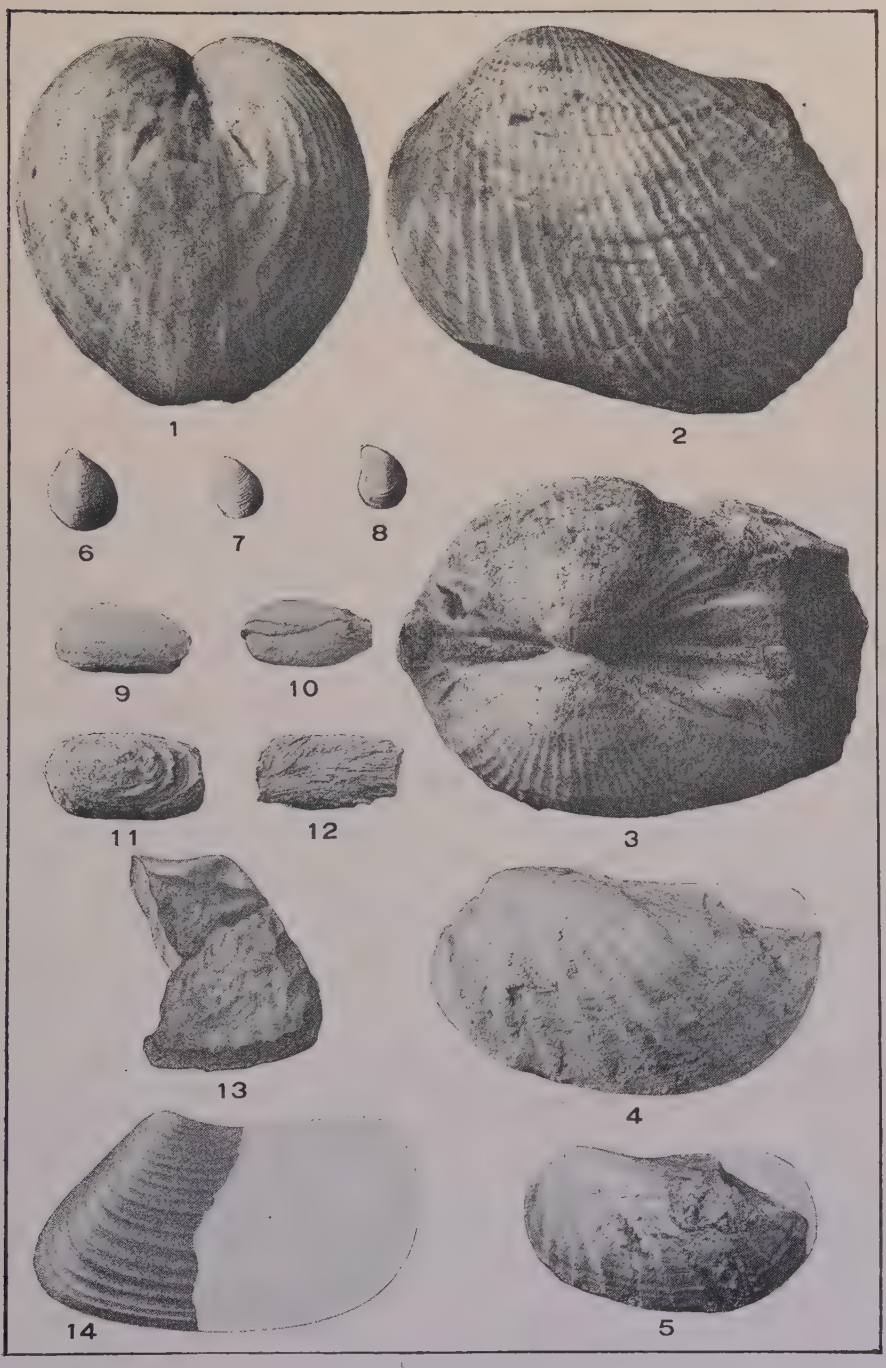
11–12. Lateral and cardinal views of a rougher example.

Navesink marl; near Walnford, (148).

CERCOMYA PECULARIS (Conrad), ... p. 518

13–14. Two views of the type specimen. (After Whitfield.)

Navesink marl; Crosswicks Creek.



PELECYPODA.

EXPLANATION OF PLATE LVII.

ANATINA JERSEYENSIS n. sp., ... p. 516

1–2. Cardinal and lateral views of a nearly complete internal cast.
Merchantville clay-marl; near Jamesburg, (141).

3. Lateral view of an internal cast.
Wenonah sand; near Marlboro, (130).

4. Lateral view of a small, imperfect internal cast referred doubtfully to this species.
Woodbury clay; Lorillard, (102).

ANATINA CLIFFWOODENSIS n. sp., ... p. 517

5–6. Cardinal and lateral views of an internal cast.
Cliffwood clay; Cliffwood Point, (185).

ANATINA JAMESBURGENSIS n. sp., ... p. 517

7. Lateral view of the type specimen. The lower half restored.
Merchantville clay-marl; near Jamesburg, (139).

PERIPLOMYA ELLIPTICA (Gabb), ... p. 522

8–9. Cardinal and lateral views of a specimen illustrated by Whitfield.
Locality unknown.

10. Lateral view of the type of *P. truncata* Whitf.
Manasquan marl; New Egypt.

11. Lateral view of the type of *Veleda nasuta* Whitf.
Manasquan marl; New Egypt.

ANATIMYA ANTERADIATA Conrad, ... p. 519

12. Lateral view of a nearly complete cast of a single valve.
Wenonah sand; near Marlboro, (130).

ANATIMYA LATA (Whitfield), ... p. 521

13. Lateral view of the type of the species.
Wenonah sand; near Marlboro.

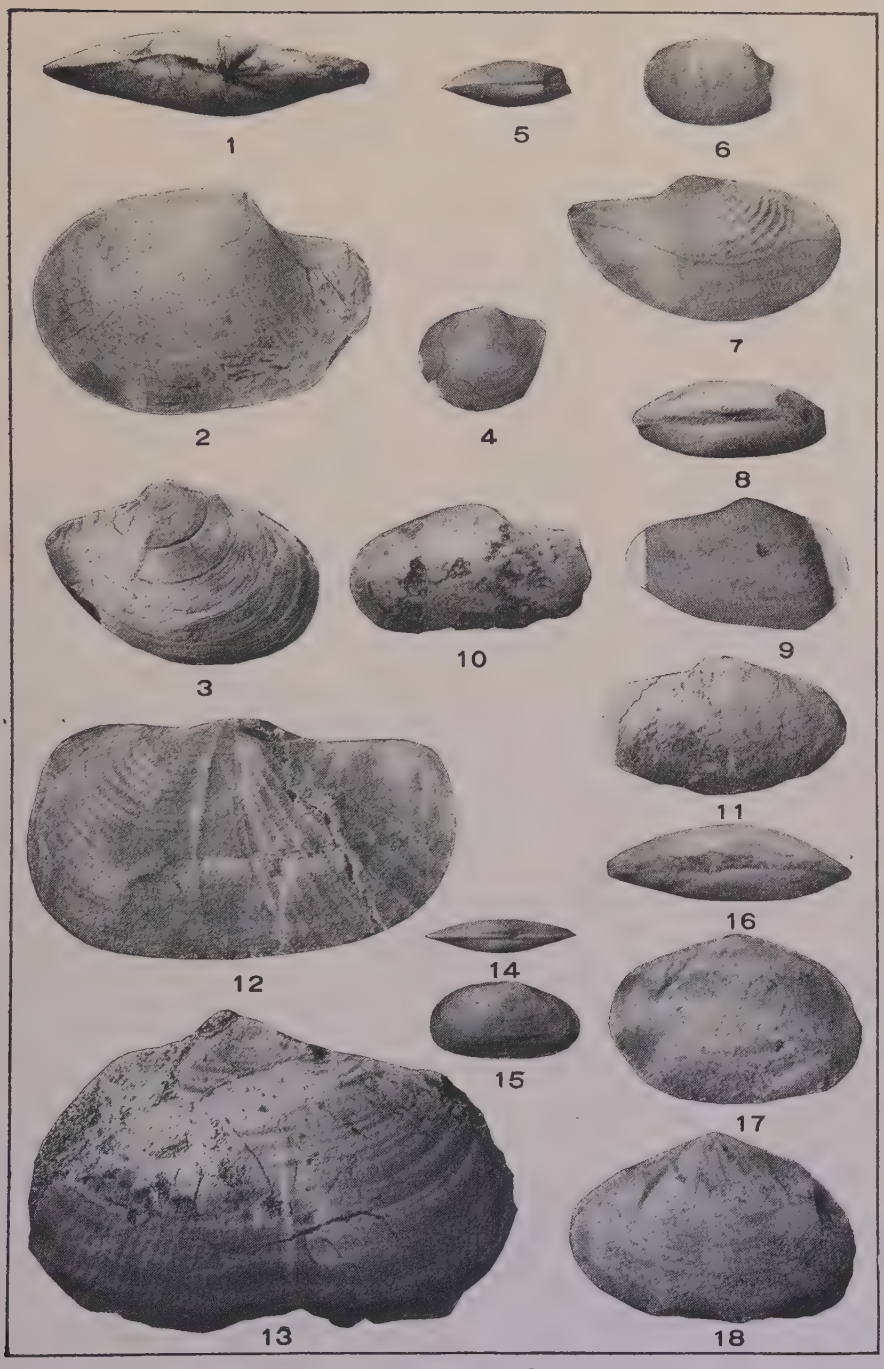
CORIMYA? sp.

14–15. Cardinal and lateral views of a very perfect internal cast.
Merchantville clay-marl; Lenola, (163).

CORIMYA TENUIS Whitfield, ... p. 525

16–17. Cardinal and lateral views of a nearly complete internal cast.
Navesink marl; Mullica Hill, (169).

18. Lateral view of another nearly complete internal cast.
Navesink marl; near Crawfords Corner, (126').



PELECYPODA.

EXPLANATION OF PLATE LVIII.

CLAVACELLA ARMATA Morton,.....p. 525

1–2. Lateral and cardinal views of a very perfect internal cast.
Navesink marl; Atlantic Highlands, (108).

LIOPISTHA KÜMMELI n. sp.,.....p. 529

3. Lateral view of the type specimen, an internal cast.
Merchantville clay-marl; Lenola, (163).

LIOPISTHA PROTEXTA (Conrad),.....p. 526

4. Lateral view of an internal cast of a single valve.
Red Bank sand; near Middletown, (112).

5–6. Lateral and cardinal views of a very perfect internal cast.
Navesink marl; Mullica Hill, (169).

LIOPISTHA ALTERNATA n. sp.,.....p. 527

7–8. Lateral views of two internal casts.
Merchantville clay-marl; near Matawan, (101).

9. Lateral view of an internal cast.
Merchantville clay-marl; near Jamesburg, (139).

CYMELLA BELLA Conrad,.....p. 530

10. Lateral view of an incomplete internal cast of a single valve.
Cliffwood clay; near Matawan, (107).

11. Lateral view of an internal cast of a single valve.
Wenonah sand; near Marlboro, (130).

12. Lateral view of the internal cast of a large single valve.
Woodbury clay; Lorillard, (102).

CYMELLA UNDATA (Meek and Hayden),.....p. 531

13. Lateral view of a small single valve.
Wenonah sand; near Marlboro, (130).

CUSPIDARIA JERSEYENSIS n. sp.,.....p. 534

14–15. Lateral and cardinal views of the type specimen.
Navesink marl; near Crawfords Corner, (126[1]).

CUSPIDARIA VENTRICOSA (Meek and Worthen), ...p. 533

16–17. Lateral views of two more or less distorted internal casts of separate valves.
Red Bank sand; Red Bank, (116).

VENIELLA CONRADI Morton,.....p. 534

18. External view of a nearly perfect left valve.

19. View of the hinge of a right valve.
Marshalltown clay-marl; near Swedesboro, (177).

ETEA TRAPEZOIDEA (Conrad),.....p. 543

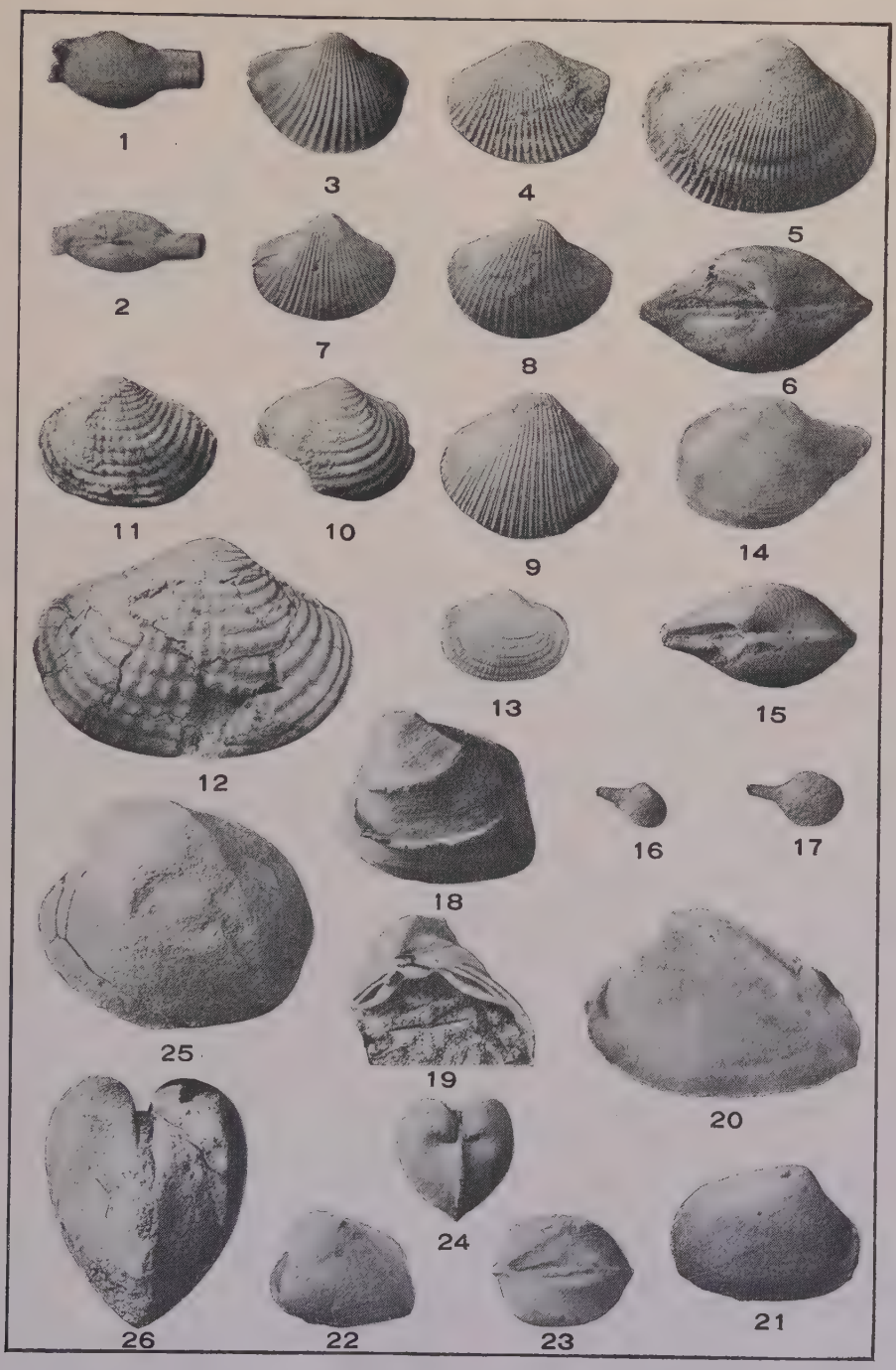
20–21. Lateral views of two internal casts.
Merchantville clay-marl; near Matawan, (101).

VENIELLA ? RHOMBOIDEA Conrad,.....p. 538

22–24. Lateral, cardinal and anterior views of a nearly perfect internal cast.
Manasquan marl; Farmingdale.

VENIELLA ? DECISA (Morton),.....p. 540

25–26. Lateral and posterior views of an internal cast identified as this species by Whitfield.
Hornerstown marl; Blue Ball.



PELECYPODA.

EXPLANATION OF PLATE LIX.

VENIELLA TRIGONA (Gabb), ... p. 537

1. Lateral view of an internal cast of the left valve.
   Navesink marl; near Walnford, (147[4]).
2. Lateral view of an internal cast of the left valve.
3. Lateral view of a plaster cast taken from the natural mould of the exterior of the same specimen of which fig. 2 is the internal cast.
   Tinton Beds; Beers Hill Cut, (129[5]).

ETEA CAROLINENSIS Conrad, ... p. 541

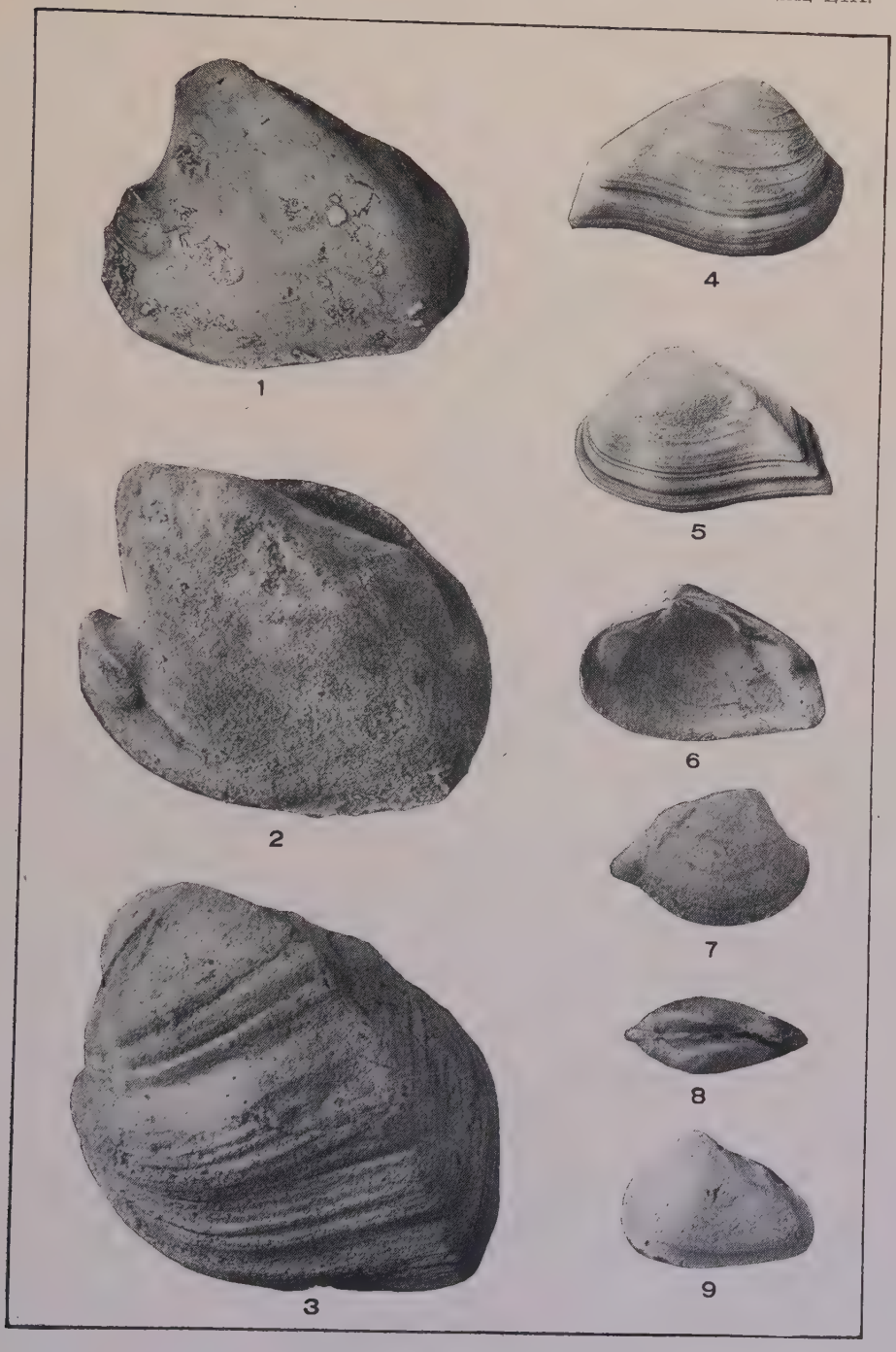
4–5. External views of a right and a left valve.
6. Internal view of a right valve, showing the hinge.
   Marshalltown clay-marl; near Swedesboro, (177).

ETEA TRAPEZOIDEA (Conrad), ... p. 543

7. Lateral view of a somewhat distorted internal cast of a right valve.
   Merchantville clay-marl; Lenola, (163).

ETEA DELAWARENSIS (Gabb), ... p. 546

8–9. Cardinal and lateral views of a nearly perfect internal cast.
   Manasquan marl; Pemberton, (101).



PELECYPODA.

EXPLANATION OF PLATE LX.

AMBOCARDIA COOKII Whitfield, ... p. 548

1–2. Lateral and anterior views of the type specimen.
Raritan clay.

ASTARTE VETA Conrad, ... p. 549

3. View of the type specimen. (After Whitfield.)
Raritan clay; Washington.

ERIPHYLA CONRADI (Whitfield), ... p. 550

4. A squeeze from a natural mould of the exterior.
Merchantville clay-marl; near Jamesburg, (141).

5. The internal cast of a left valve, (x2).
Merchantville clay-marl; near Jamesburg, (140).

6–8. External and internal views of a left valve and internal view of a right valve, (x3). (The type specimens, after Whitfield.)
Woodbury clay; Haddonfield, (183).

ERIPHYLA DECEMNARIA (Conrad), ... p. 551

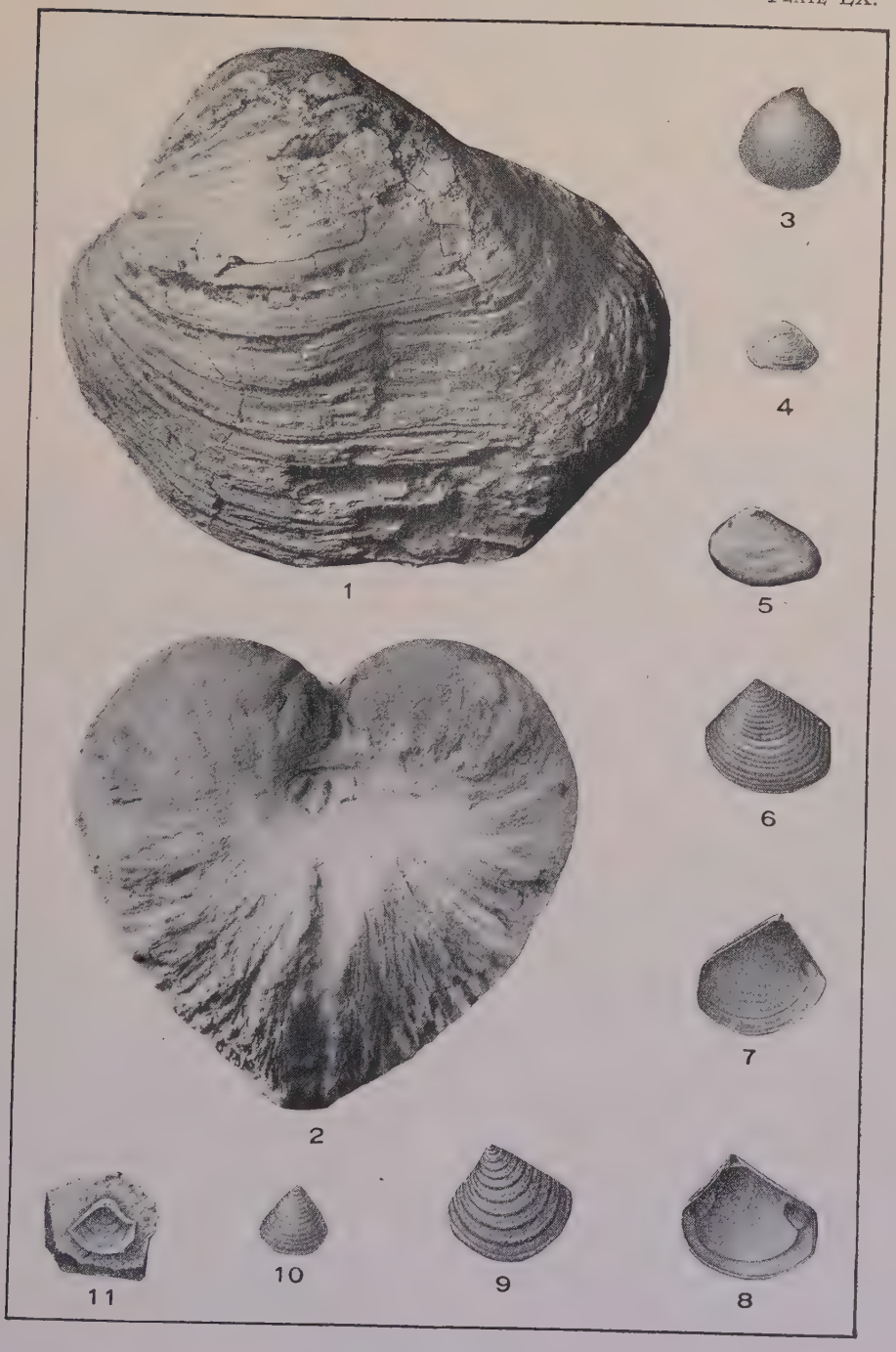
9. Lateral view of the type specimen. (After Whitfield.)
Woodbury clay; Haddonfield, (183).

ERIPHYLA DECLIVIS (Conrad), ... p. 551

10. View of the type specimen, (x2). (After Whitfield.)
Woodbury clay; Haddonfield, (183).

ERIPHYLA PARILIS (Conrad), ... p. 552

11. View of the type specimen. (After Whitfield.)
Horizon and locality not known.



PELECYPODA.

EXPLANATION OF PLATE LXI.

CRASSATELLITES SUBPLANUS (Conrad), ... p. 553

1. The internal cast of a right valve.
Navesink marl; near Walnford, (147[4]).

2. The internal cast of a right valve.
Red Bank sand; Red Bank, (116).

3–4. External and internal views of a right valve.
Marshalltown clay-marl; near Swedesboro, (177).

CRASSATELLITES TRANSVERSUS (Gabb), ... p. 555

5. Lateral view of a left valve.
Wenonah sand; near Marlboro, (130).

CRASSATELLITES PRORUS (Conrad), ... p. 558

6–7. Lateral and cardinal views of the type specimen. (After Whitfield).
Merchantville clay-marl ?; Crosswicks.

CRASSATELLITES RHOMBEA (Whitfield), ... p. 561

8. Lateral view of one of the type specimens.
Manasquan marl; New Egypt.

CRASSATELLITES LITTORALIS (Conrad), ... p. 559

9. Lateral view of one of the type specimens of *Crassatella conradi* Whitf.
Manasquan marl; Squankum.

10. Lateral view of one of the specimens illustrated by Whitfield.
Manasquan marl; Squankum.

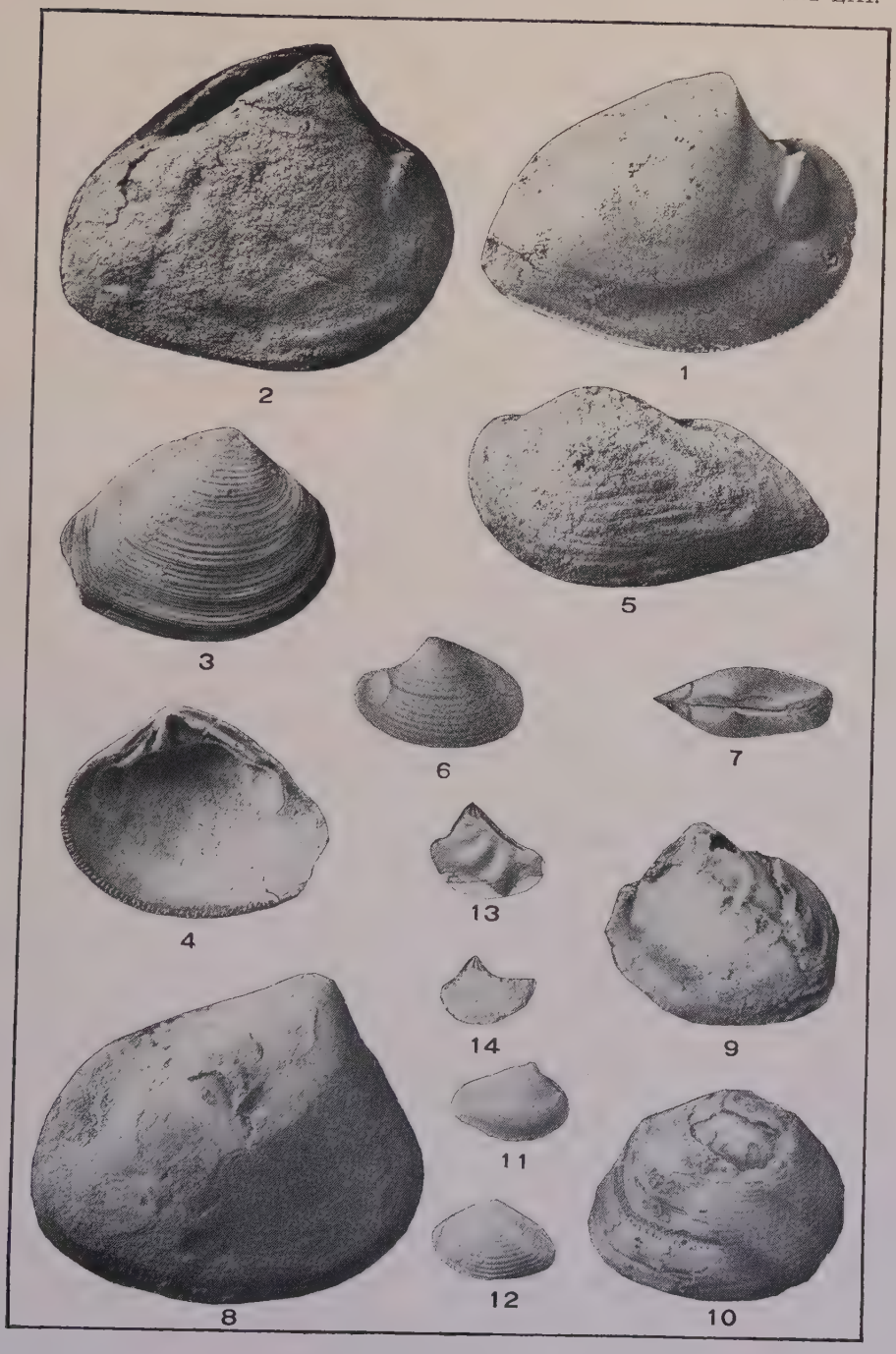
CRASSATELLITES CUNEATUS (Gabb), ... p. 556

11–12. Lateral views of two internal casts.
Merchantville clay-marl; Lenola, (163).

SCAMBULA PERPLANA Conrad, ... p. 562

13. An internal cast of a left valve.
Woodbury clay; Lorillard, (102).

14. An internal cast of a left valve.
Wenonah sand; near Marlborough, (130).



PELECYPODA.

EXPLANATION OF PLATE LXII.

CORBICULA ANNOSA (Conrad), ... p. 563

1–2. Lateral and cardinal views of a specimen illustrated by Whitfield.

3. Lateral view of another specimen.

Raritan clay; Sayreville or Woodbridge.

CORBICULA? EMACERATA Whitfield, ... p. 564

4–5. Lateral and cardinal views of the type specimen.

Raritan clay; near Woodbridge.

CARDITA INTERMEDIA Whitfield, ... p. 565

6–7. Lateral and cardinal views of the type specimen. (After Whitfield.)

Manasquan marl; Farmingdale.

8. The internal cast of a left valve.

Long Branch sand; near Deal, (122).

VETERICARDIA CRENALIRATA (Conrad), ... p. 566

9–10. External and internal views of one of the type specimens, (x4). (After Whitfield.)

Woodbury clay; Haddonfield, (183).

DICERAS DACTYLOIDES Whitfield, ... p. 567

11–12. Two views of the type specimen.

Navesink marl; near Walnford.

CAPROTINA JERSEYENSIS n. sp., ... p. 568

13–15. Two lateral views and an upper view of the type specimen.

Navesink marl; near Crawfords Corner, (126[1]).

UNICARDIUM UMBONATA (Whitfield), ... p. 569

16–17. Lateral view of a very perfect left valve and the hinge of the same.

Marshalltown clay-marl; near Swedesboro, (177).

LUCINA CRETACEA Whitfield, ... p. 570

18. Lateral view of the internal cast of a left valve.

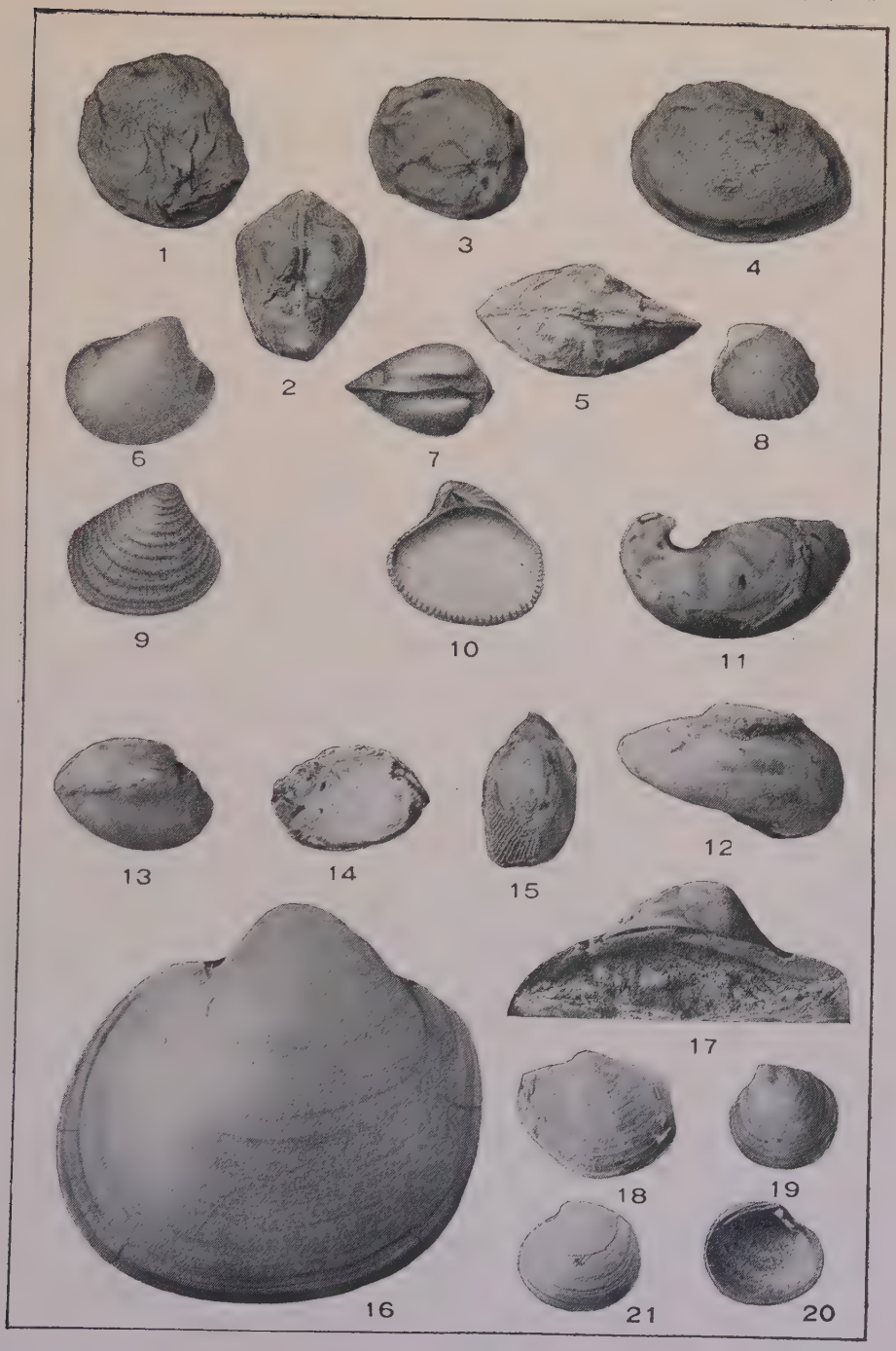
Woodbury clay; Lorillard, (102).

LUCINA SWEDESBOROENSIS n. sp., ... p. 571

19–20. External and internal views of a left valve.

21. External view of another left valve.

Marshalltown clay-marl; near Swedesboro, (177).



PELECYPODA.

EXPLANATION OF PLATE LXIII.

TENEA PARILIS Conrad, ... p. 572

1–2. The internal cast of a left valve and a plaster cast from the natural mould of the exterior of the same.

3. The internal cast of a more ovate left valve.

Woodbury clay; Lorillard, (102).

4–5. Lateral and anterior views of an internal cast.

Navesink marl.

6. Lateral view of a small internal cast of a left valve.

Red Bank sand; Shrewsbury River (119).

TENEA PINGUIS Conrad, ... p. 574

7. Lateral view of an internal cast, (x2).

Navesink marl, near Walnford (148²).

CARDIUM NUCLEOLUS (Whitfield), ... p. 575

8–9. Lateral and cardinal view of the type specimen, (x2). (After Whitfield.)

Manasquan marl; Farmingdale.

CARDIUM WENONAH n. sp., ... p. 576

10. Lateral view of a right valve.

11–12. Lateral and posterior views of a complete specimen.

13. Interior of a right valve.

Corsicana, Texas, U. S. Nat. Mus. Coll. No. 20,927.

14–16. Lateral views of the internal casts of three right valves.

Wenonah sand; near Marlboro, (130).

CARDIUM EUFAULENSIS Conrad, ... p. 577

17–18. External and internal views of a left valve.

Union Co. Miss., U. S. Nat. Mus. Coll. No. 20,847.

19. The internal cast of a right valve.

20. Squeeze taken from a natural mould of the exterior.

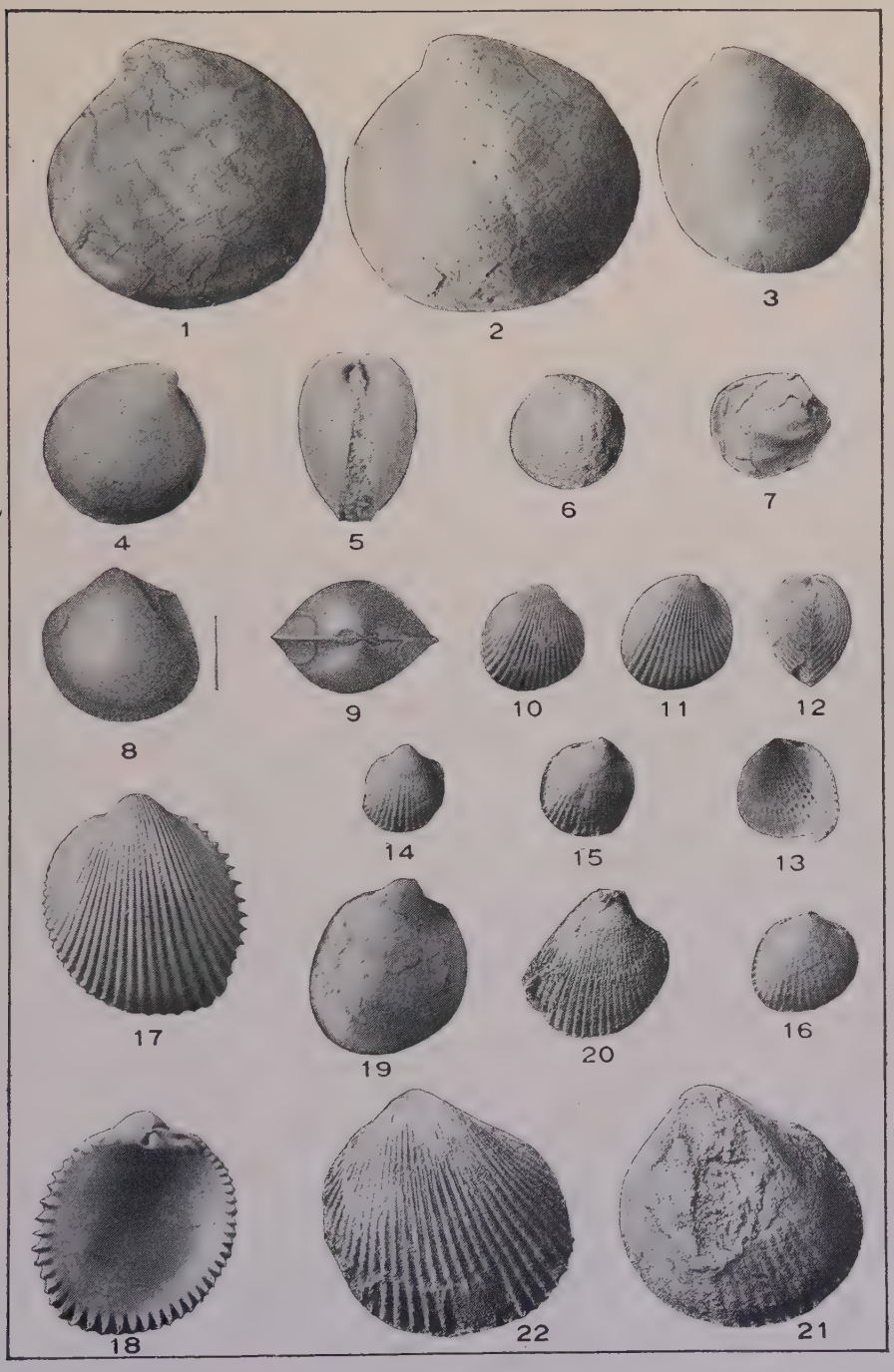
Wenonah sand; near Crawfords Corner, (126³).

CARDIUM LONGSTREETI n. sp., ... p. 579

21. The internal cast of a left valve.

22. Squeeze taken from the natural mould of the exterior of the same.

Wenonah sand; near Crawfords Corner, (126³).



PELECYPODA.

EXPLANATION OF PLATE LXIV.

CARDIUM CLIFFWOODENSIS n. sp., ... p. 581

1–2. The internal cast of a right valve and squeeze taken from the natural mould of the exterior of the same.

3. A squeeze taken from another natural mould of the exterior.

4. The internal cast of a small left valve.

Cliffwood clay; Cliffwood Point, (185).

CARDIUM LORILLARDENSIS n. sp., ... p. 582

5. The internal cast of a right valve.

6. Squeeze from the natural mould of the exterior of the same.

Woodbury clay, Lorillard (102).

CARDIUM sp.

7. Imperfect cast of a left valve illustrated by Whitfield as *C. eufaulensis.*

Navesink marl; Holmdel.

CARDIUM WHITFIELDI n. sp., ... p. 580

8. Left lateral view of the type specimen, a nearly complete internal cast.

Woodbury clay; Lorillard, (102).

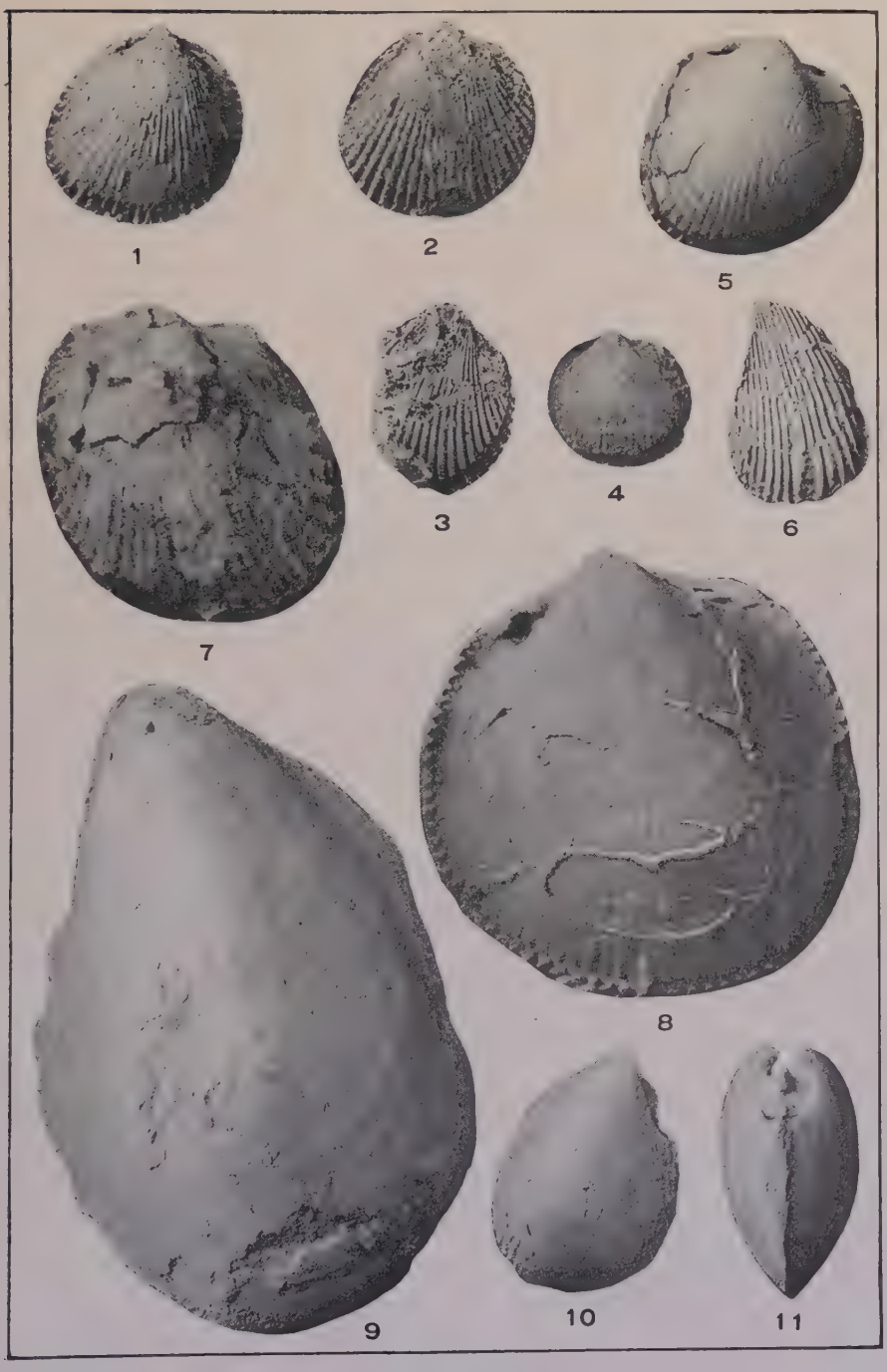
CARDIUM SPILLMANI Conrad, ... p. 583

9. Lateral view of a large internal cast of a left valve.

Navesink marl; near Walnford, (147[4]).

10–11. Lateral and anterior views of a small, nearly perfect internal cast.

Merchantville clay-marl; near Matawan, (101).



PELECYPODA.

EXPLANATION OF PLATE LXV.

CARDIUM UNIFORMIS n. sp., ... p. 588

1–2. Lateral and posterior views of a very perfect internal cast.

3. Squeeze taken from a portion of the natural external mould of the same.

Woodbury clay; Lorillard, (102).

CARDIUM RIPLEYANUM Conrad, ... p. 582

4–5. Posterior and lateral views of a complete internal cast, (x2).

6. Lateral view of another internal cast, (x2).

Woodbury clay; Lorillard, (102).

CARDIUM DUMOSUM Conrad, ... p. 590

7–8. The incomplete cast of a left valve and a squeeze taken from the natural mould of the exterior of the same.

9. Lateral view of a small, very perfect internal cast.

10. The same (x2).

Woodbury clay; Lorillard, (102).

CARDIUM PILSBRYI n. sp., ... p. 594

11–12. Lateral views of two internal casts, a left valve and a right valve.

Merchantville clay-marl; Lenola, (163).

CARDIUM TENUISTRIATUM (Whitfield), ... p. 591

13. View of the type specimen.

Wenonah sand; near Marlboro.

14. View of a squeeze from a natural mould of the exterior, to show the character of the surface markings.

Merchantville clay-marl; Lenola, (163).

15–16. Lateral and posterior views of a nearly perfect internal cast.

Merchantville clay-marl; Lenola, (163).

17. A right valve partially preserving of the shell.

Marshalltown clay-marl; near Swedesboro, (177).

18–19. Anterior and lateral views of a nearly perfect internal cast.

Marshalltown clay-marl; Marshalltown, (190).

CARDIUM TRILLINEATUM n. sp., ... p. 589

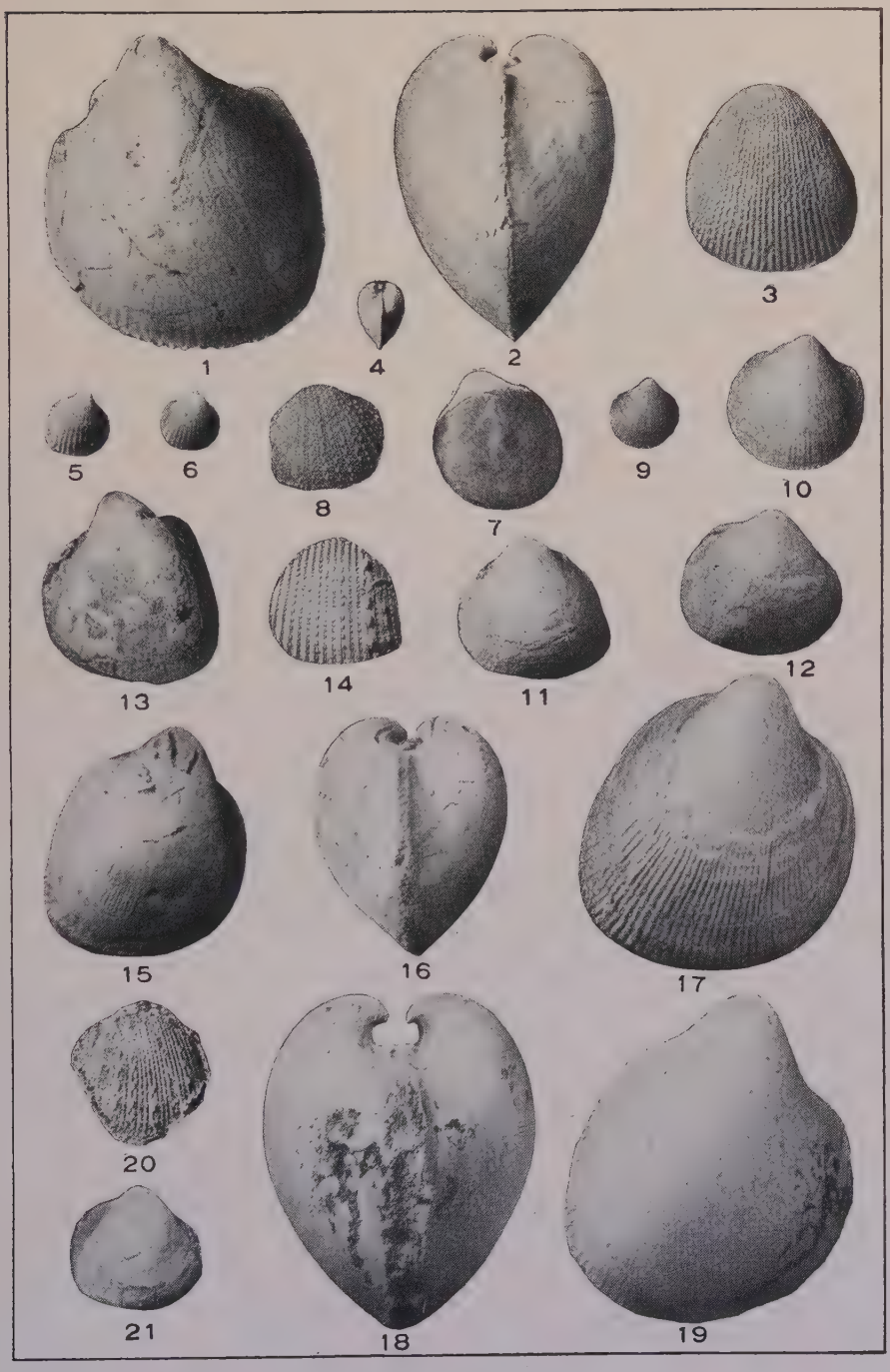
20. A squeeze from a natural mould of the exterior, showing the character of the surface markings.

Navesink marl; Atlantic Highlands, (108).

PROTOCARDIUM JERSEYENSIS n. sp., ... p. 596

21. The internal cast of a right valve, (x2).

Merchantville clay-marl; near Jamesburg, (140).



PELECYPODA.

EXPLANATION OF PLATE LXVI.

CARDIUM KÜMMELI n. sp., ... p. 585

1. Lateral view of an incomplete right valve partially preserving the shell.
2. The internal cast of a right valve.
   Tinton beds; Beers Hill Cut, (129[9]).
3. External view of a perfect right valve.
   Mississippi, Coll. U. S. Nat. Mus.

CARDIUM KNAPPI n. sp., ... p. 595

4. The internal cast of a right valve.
   Vincentown sand; near Deal, (122).
5. The internal cast of a left valve.
   Vincentown limesand; New Egypt, (143).

6–7. Lateral and anterior views of a nearly complete internal cast.
   Hornerstown marl; near Juliustown; (160).

FULVIA TENUIS Whitfield, ... p. 597

8. View of the type specimen.
   Navesink marl; Holmdel.

ISOCARDIA TINTONENSIS n. sp., ... p. 599

9. View of the type specimen.
   Tinton beds; Beers Hill Cut, (129[5]).

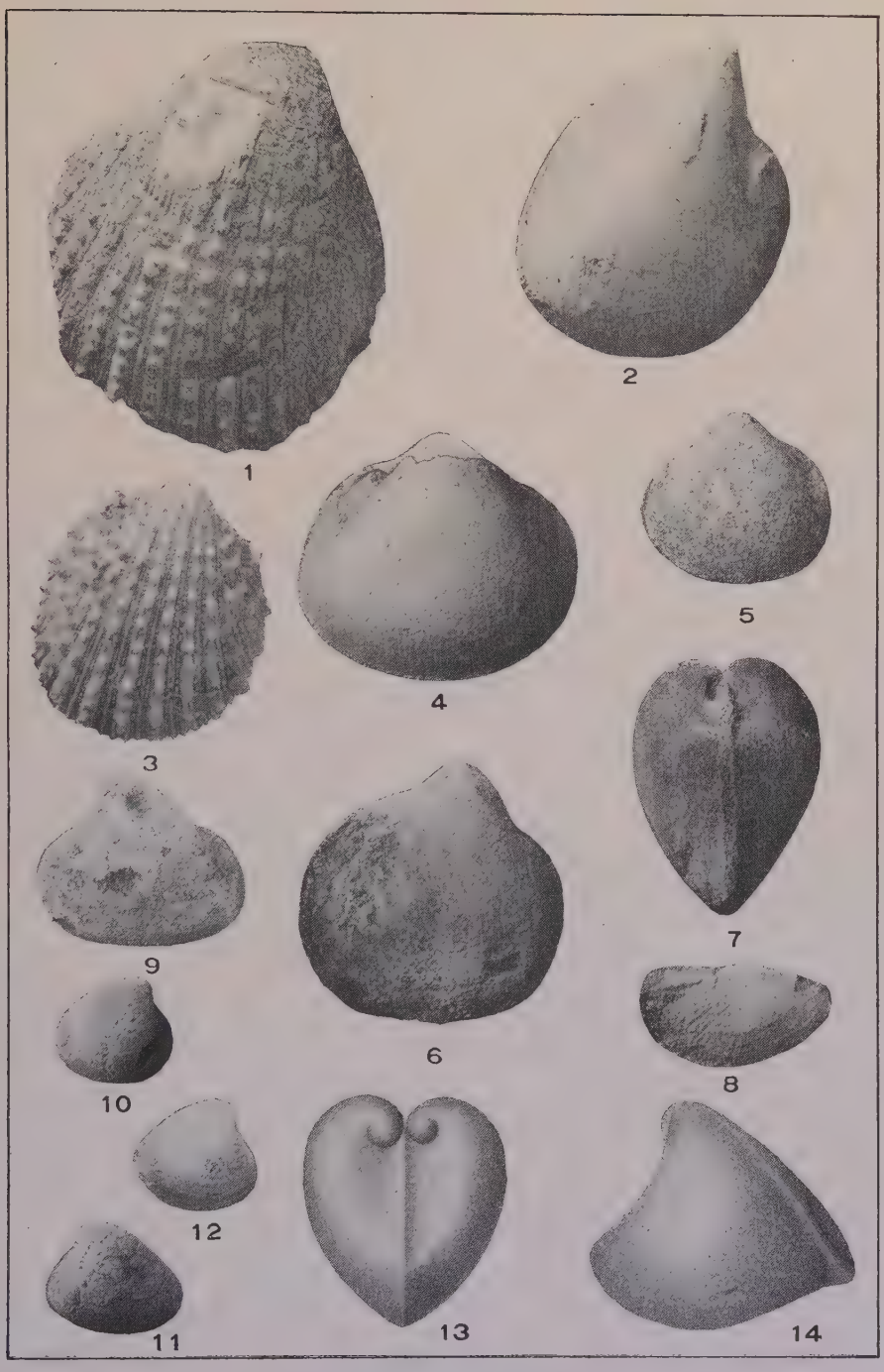
ISOCARDIA CLIFFWOODENSIS Weller, ... p. 598

10–11. Lateral views of two internal casts of single valves.
   Cliffwood clay; near Matawan, (186).

12. Lateral view of an internal cast of a right valve.
   Cliffwood clay; near Matawan, (107).

ISOCARDIA CONRADI Gabb, ... p. 599

13–14. Anterior and lateral views of the type specimen. (After Whitfield.)
   Vincentown limesand; Timber Creek.



PELECYPODA.

EXPLANATION OF PLATE LXVII.

CYPRIMERIA EXCAVATA (Morton), ... p. 602

1–2. Views of two left valves.

3. View of the hinge of the right valve.

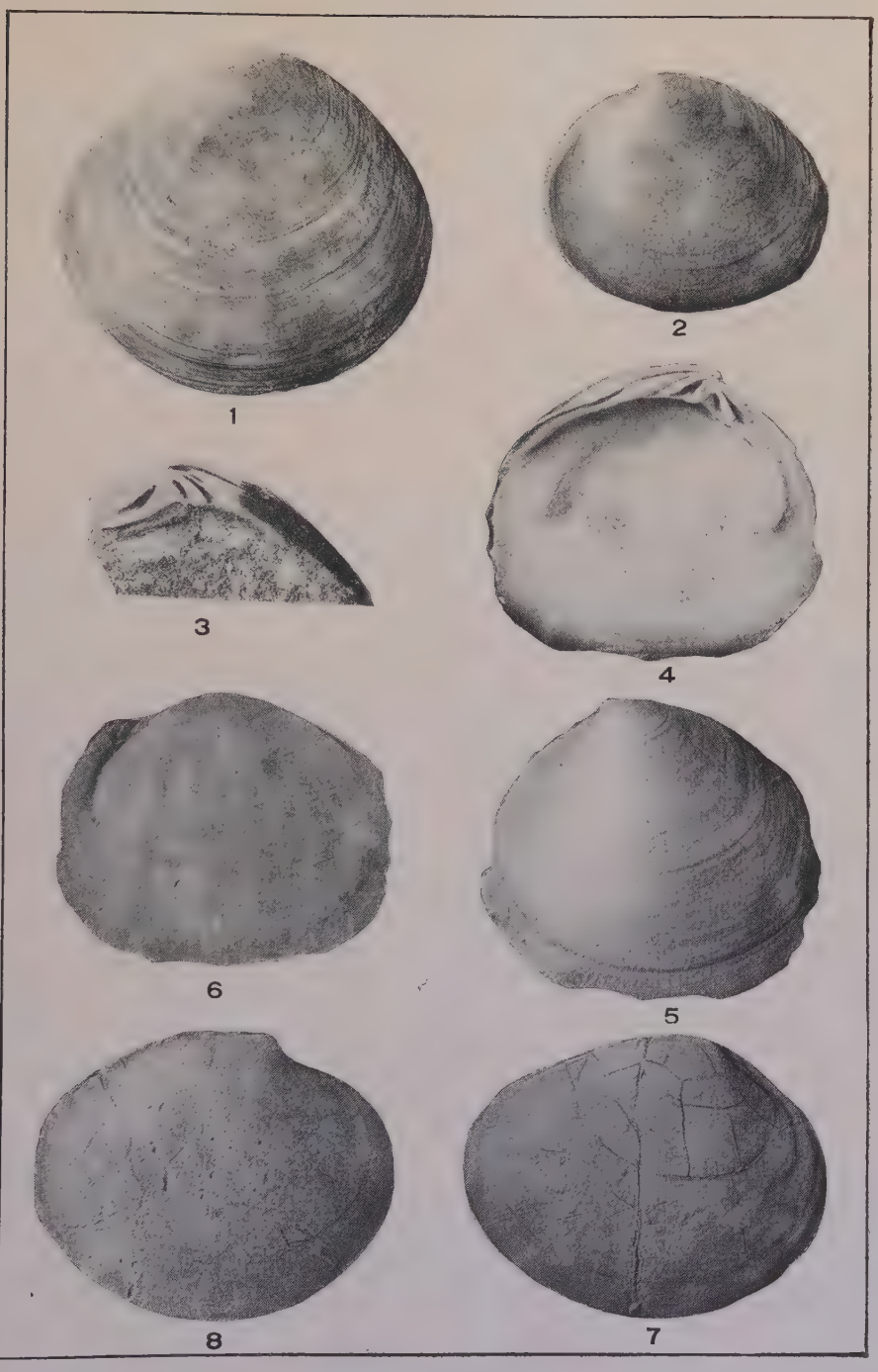
4–6. Interior and exterior views of a left valve, and a plaster cast taken from the interior of the same.

Marshalltown clay-marl; near Swedesboro, (*177*).

CYPRIMERIA CRETACEA Conrad, ... p. 604

7–8. The internal cast of a right valve, and a plaster cast taken from the natural mould of the exterior of the same.

Woodbury clay; Lorillard, (*102*).



PELECYPODA.

EXPLANATION OF PLATE LXVIII.

MERETRIX TIPPANA Conrad, ... p. 607

1–2. Internal and external views of a perfect left valve.
Ripley, Miss. Coll. U. S. Nat. Mus., No. 20,690.

3. A somewhat distorted cast of the interior of a left valve.
Merchantville clay-marl; Lenola, (163).

MERETRIX CRETACEA (Conrad), ... p. 608

4–5. Views of two right valves.

6–7. Views of the hinges of the two valves.
Marshalltown clay-marl; near Swedesboro, (177).

MERETRIX EUFAULENSIS (Conrad), ... p. 609

8. View of a left valve.

9–10. Interior and exterior views of a left valve.
Marshalltown clay-marl; near Swedesboro, (177).

CARYATIS VETA Whitfield, ... p. 611

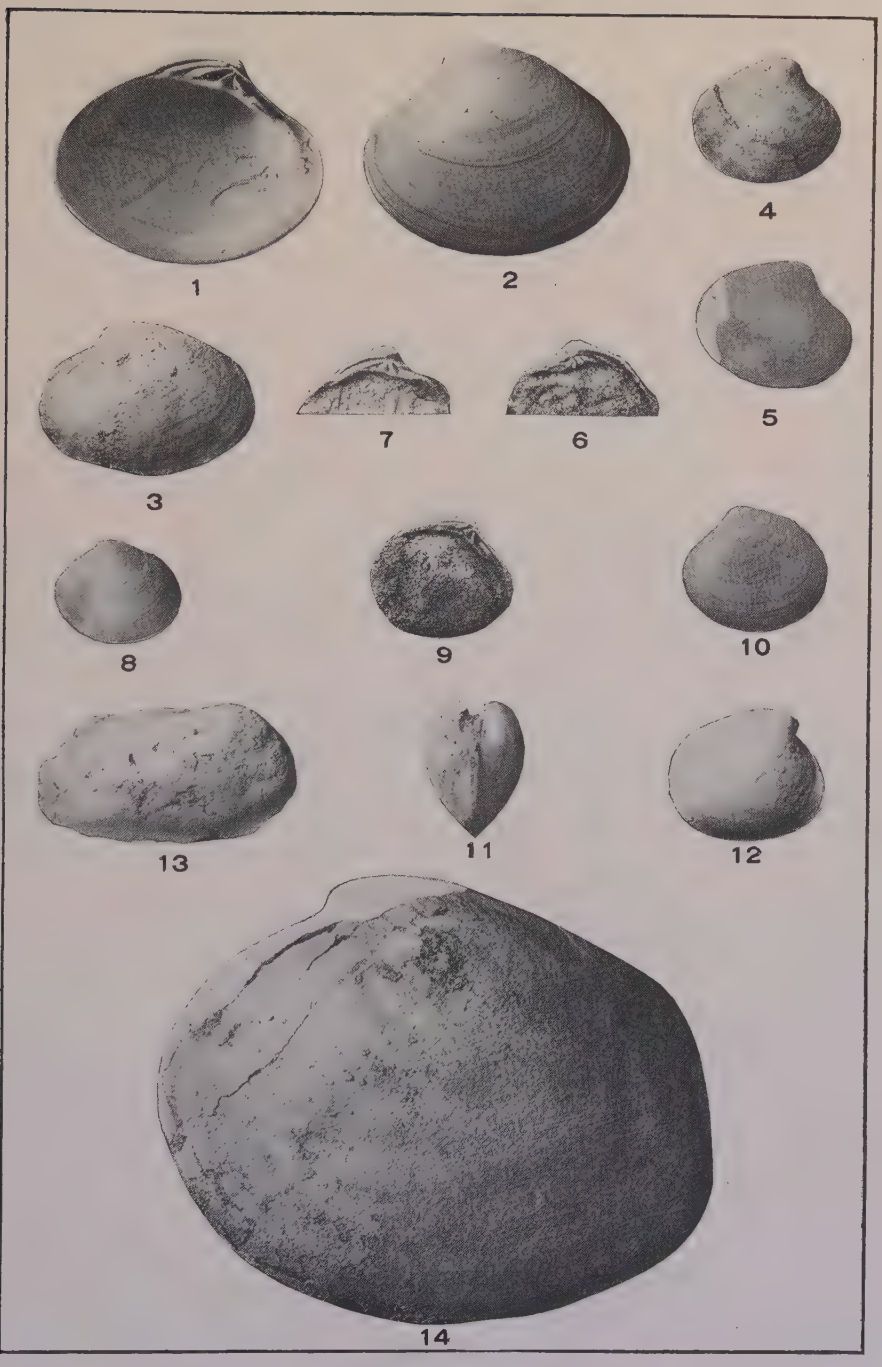
11-12. Anterior and lateral views of an internal cast.
Manasquan marl; near New Egypt, (155).

PETRICOLA NOVA-AEGYPTICA Whitfield, ... p. 614

13. Lateral view of the type specimen.
Manasquan marl; near New Egypt.

CYPRIMERIA DENSATA (Conrad), ... p. 601

14. Lateral view of a large internal cast of a left valve.
Navesink marl; Holmdel.



PELECYPODA.

EXPLANATION OF PLATE LXIX.

CYPRIMERIA DENSATA (Conrad), ... p. 601

1–2. Lateral and ventral views of the type specimen, a large internal cast. (After Whitfield.)

Burlington.

LEGUMEN PLANULATUM (Conrad), ... p. 612

3–4. Cardinal and lateral views of an internal cast illustrated by Whitfield.

Navesink marl; Freehold.

5. Lateral view of a large internal cast.

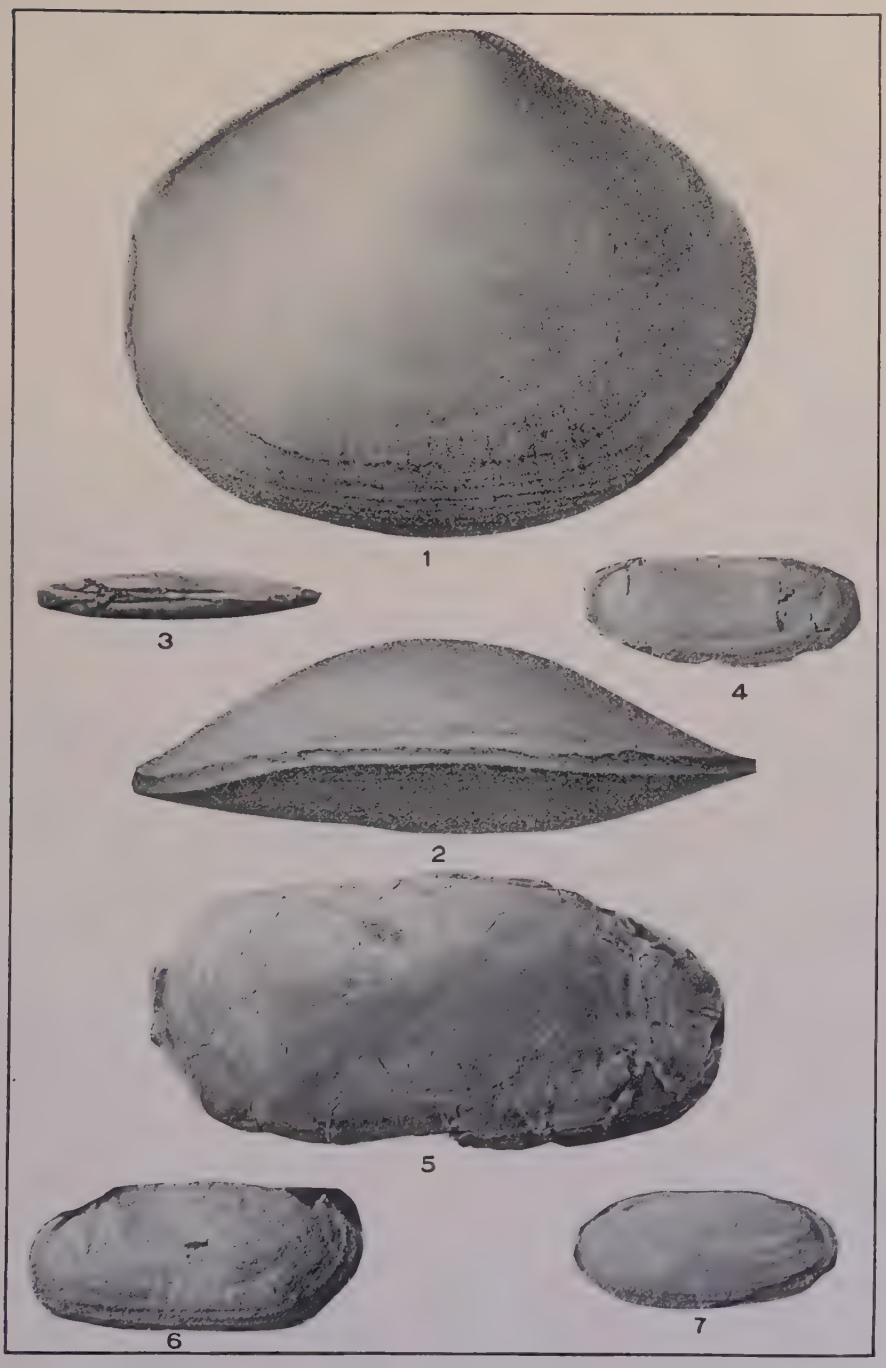
Woodbury clay; Lorillard, (102).

6. Lateral view of an internal cast.

Merchantville clay-marl; near Matawan, (101).

7. Iateral view of an internal cast.

Woodbury clay; near Haddonfield, (168).



PELECYPODA.

EXPLANATION OF PLATE LXX.

TELLINA GEORGIANA Gabb, ... p. 615

1–2. Views of two internal casts, a left valve and a right valve.
Wenonah sand; near Crawfords Corner, (126[3]).

TELLINA sp.

3. Lateral view of the internal cast of a right valve.
Cliffwood clay; near Matawan, (107).

PERONAEODERMA GEORGIANA Gabb, ... p. 617

4. The impression of two outspread valves.
5. The cast of a left valve.
Wenonah sand; near Marlboro, (130).
6. The cast of a single valve referred doubtfully to this species.
Red Bank sand; Shrewesbury River, (119).

TELLINA sp.

7. The internal cast of a right valve.
Wenonah sand; Crawfords Corner, (126[3]).

LINEARIA METASTRIATA Conrad, ... p. 618

8. View of a perfectly preserved single valve. (After Whitfield.)
Woodbury clay; Haddonfield, (183).
9. A cast of the interior and an impression of the exterior of two valves.
Wenonah sand; near Marlboro, (130).

LINEARIA ORNATISSIMA n. sp., ... p. 619

10. View of the internal cast of a single valve, (x2).
11. The natural mould of the exterior of the same, (x2).
12. The same mould of the exterior, (x6).
Woodbury clay; Lorillard, (102).

LINEARIA CONTRACTA Whitfield, ... p. 620

13. View of the type specimen. (After Whitfield.)
Navesink marl ?; Holmdel.

TELLINIMERA EBOREA Conrad, ... p. 621

14–16. Views of the casts of three single valves.
Wenonah sand; near Marlboro, (130).
17–18. The internal cast of a single valve, with a squeeze of the natural mould of the exterior of the same.
Merchantville clay-marl; near Jamesburg, (141).
19–20. The internal cast of a left valve and the same (x2).
Wenonah sand; Crawfords Corner, (126[3]).
21–23. Views of the internal casts of three single valves.
Long Branch sand, near Deal, (122).

AENONA ENFAULENSIS Conrad, ... p. 623

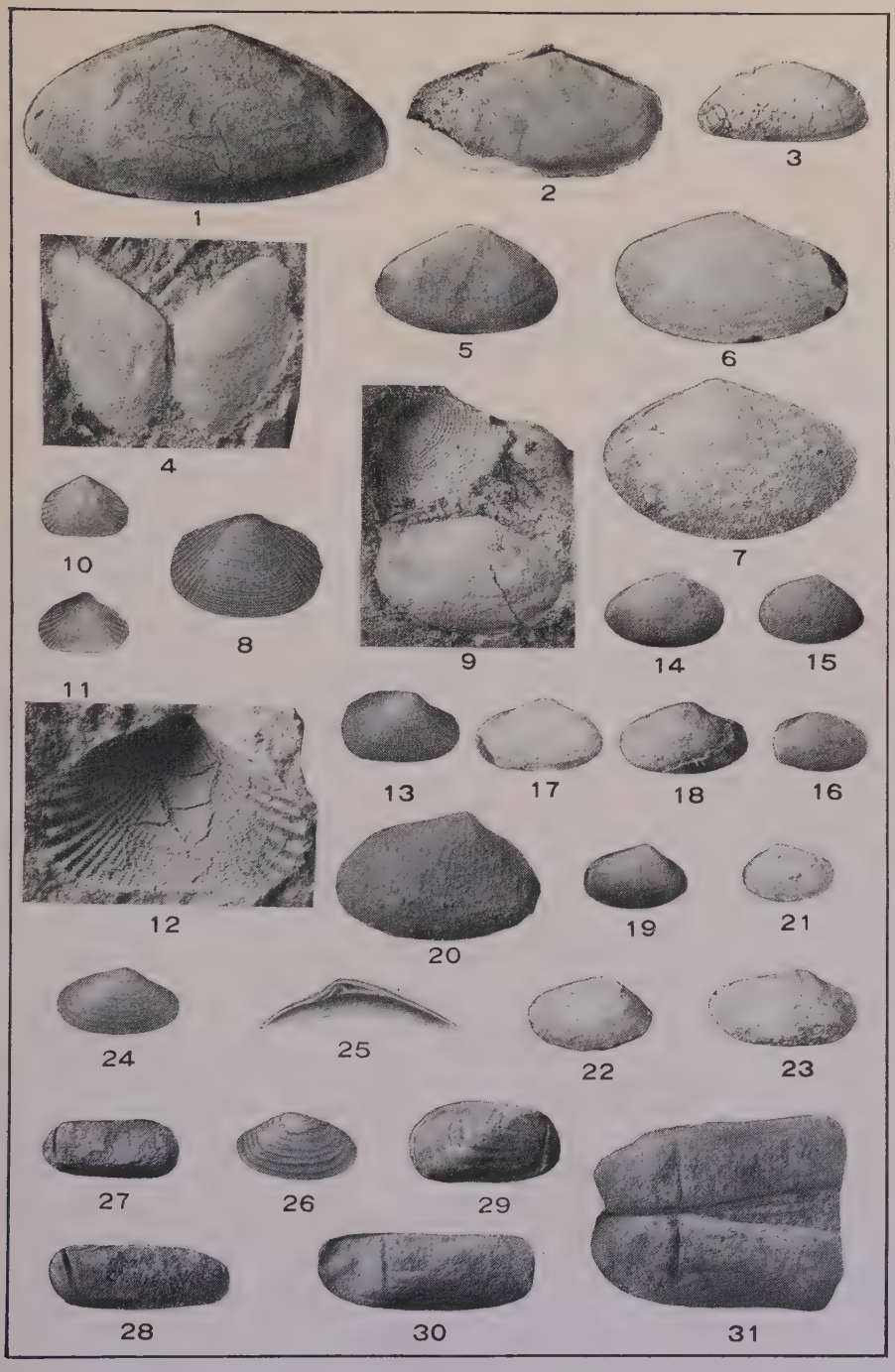
24. Lateral view of the type specimen. (After Whitfield.)
25. The hinge of the same, (x3). (After Whitfield.)
Woodbury clay; Haddonfield, (183).

AENONA PAPYRIA Conrad, ... p. 624
26. Lateral view of the type specimen.
Woodbury clay; Haddonfield, (183).

LEPTOSOLEN ? ELONGATA n. sp., ... p. 627
27. Lateral view of the internal cast of a left valve.
Red Bank sand; Red Bank, (116).
28. Lateral view of the internal cast of a left valve.
Red Bank sand; near Middletown, (112).

LEPTOSOLEN ? TERMINALIS n. sp., ... p. 626
29. Lateral view of an internal cast of a right valve.
Merchantville clay-marl; near Jamesburg, (139).

LEPTOSOLEN BIBLICATA Conrad, ... p. 624
30. Lateral view of an internal cast of a single valve.
31. View of the cast of a pair of outspread valves.
Wenonah sand; near Marlboro, (130).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PELECYPODA.

EXPLANATION OF PLATE LXXI.

SILIQUA CRETACEA Gabb,.....p. 628

1–2. Lateral and cardinal views of the type specimen. (After Whitfield.)

SOLYMA LINEOLATA Conrad,.....p. 629

3–4. Lateral views of the internal casts of two single valves, a left one and right one.
Woodbury clay; Lorillard, (102).

5. Lateral view of a small internal cast.
Merchantville clay-marl; Lenola, (163).

6. Lateral view of a large internal cast.
Woodbury clay; near Matawan, (103).

MACTRA PENTANGULARIS n. sp., ...p. 631

7–8. Views of two somewhat distorted internal casts of single valves.
Woodbury clay; Lorillard, (102).

CYMBOPHORA LINTEA (Conrad),.....p. 632

9–10. Views of the internal casts of two single valves.
Cliffwood clay; Cliffwood Point, (185).

11. View of the internal cast of a single valve.
Cliffwood clay; near Matawan, (107).

12–13. Views of the internal casts of two single valves.
Red Bank Sand; Shrewsbury River, (119).

SCHIZODESMA APPRESSA Gabb,.....p. 634

14. View of the type of *Veleda transversa* Whitf.
Wenonah sand; near Marlboro.

15–16. Views of a right valve and a left valve.
Wenonah sand; near Marlboro, (130).

17–18. Cardinal and lateral views of a complete specimen from Kaufman, Texas.
Coll. U. S. Nat. Mus., No. 21,006.

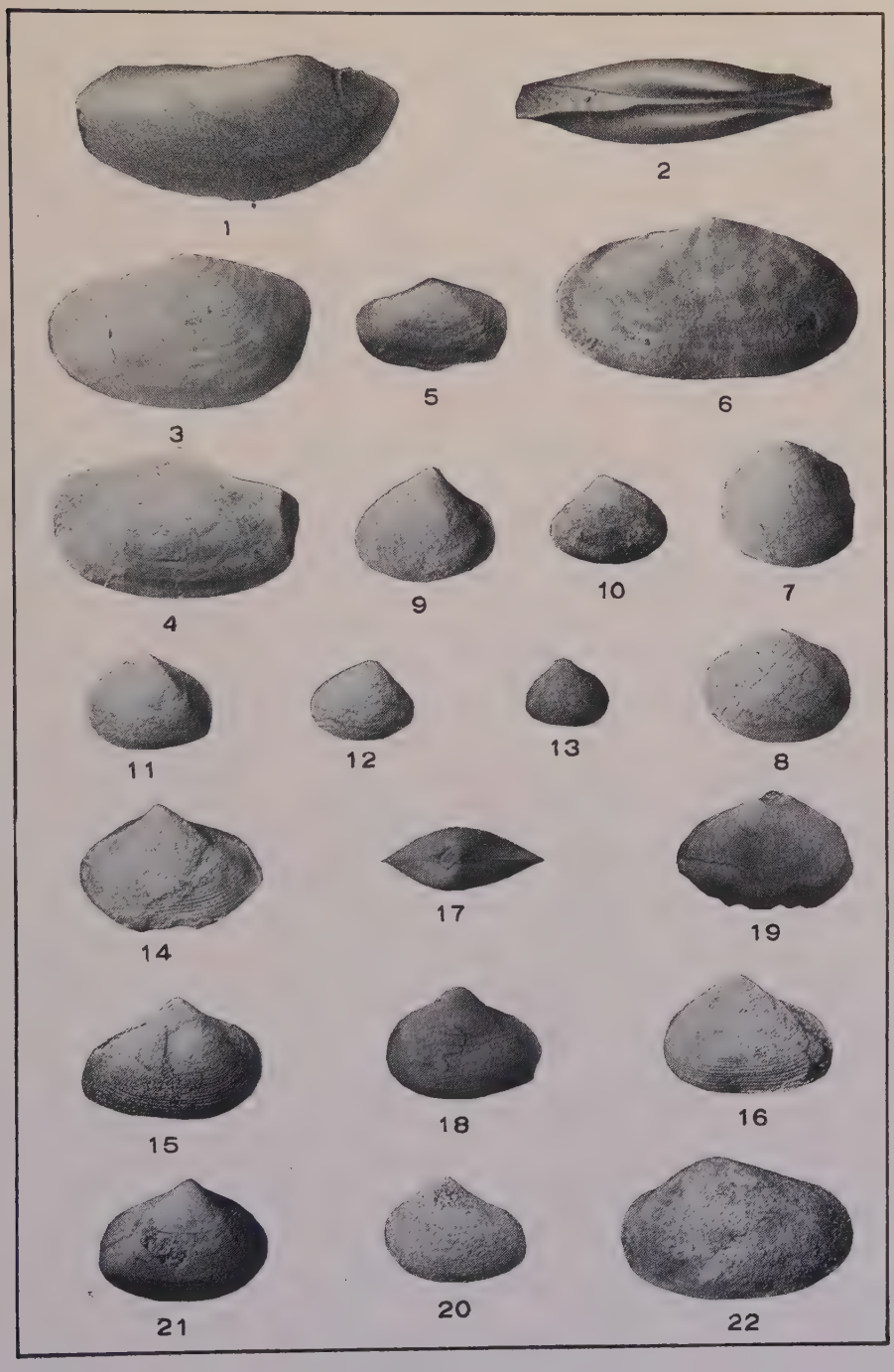
19. Lateral view of a right valve from Chatfield, Texas.
Coll. U. S. Nat. Museum.

20. Lateral view of the internal cast of a left valve.
Wenonah sand; near Crawfords Corner, (126[3]).

21. Lateral view of a right valve, more broadly truncate behind than usual.
Cliffwood clay; Cliffwood Point, (105).

CYMBOPHORA TELLINOIDES (Whitfield),.....p. 633

22. View of the type specimen.
Wenonah sand; near Marlboro.



PELECYPODA.

EXPLANATION OF PLATE LXXII.

CORBULA MANLEYI n. sp., ... p. 636

1–3. Right, left and cardinal views of a plaster cast from a natural mould of this species.

4–6. Right, left and cardinal views of the internal cast of the same specimen.

7. The right side of the plaster cast, (x2).

8. The left side of the internal cast, (x2).

Raritan formation; Sayreville.

CORBULA LORILLARDENSIS n. sp., ... p. 637

9–11. Views of three single valves.

12–14. Views of the same, (x2).

Woodbury clay; Lorillard, (102).

CORBULA BISULCATA Conrad, ... p. 638

15–16. Cardinal and lateral views of a plaster cast from a natural mould, partially restored.

17. Lateral view of the same, (x2).

18–19. Lateral and cardinal views of an internal cast.

20–22. Lateral and cardinal views of an internal cast, and a lateral view of the same, (x2).

Cliffwood clay; Cliffwood Point, (105).

CORBULA FOULKEI Lea, ... p. 640

23. Lateral view of an internal cast.

24. The same, (x2).

25. Lateral view of a plaster cast from the natural mould of the exterior of the same individual.

26. The same, (x2).

Woodbury clay; near Matawan, (103).

CORBULA CRASSIPLICA Gabb, ... p. 641

27. Lateral view of a squeeze from a natural mould, (x2).

Merchantville clay-marl; near Jamesburg, (139).

28. Lateral view of a right valve, (x3). (After Whitfield.)

Woodbury clay; Haddonfield, (183).

CORBULA CLIFFWOODENSIS n. sp., ... p. 643

29. Lateral view of the internal cast of a right valve.

30. The same, (x2).

31. Lateral view of the internal cast of a right valve.

32. The same, (x2).

Cliffwood clay; Cliffwood Point, (185).

CORBULA SWEDESBOROENSIS n. sp., ... p. 644

33. Lateral view of the type specimen.

34. The same, (x2).

Marshalltown clay-marl; near Swedesboro, (177).

35. Lateral view of the internal cast of a single valve.

Cliffwood clay; near Matawan (189).

CORBULA JERSEYENSIS n. sp., ... p. 644

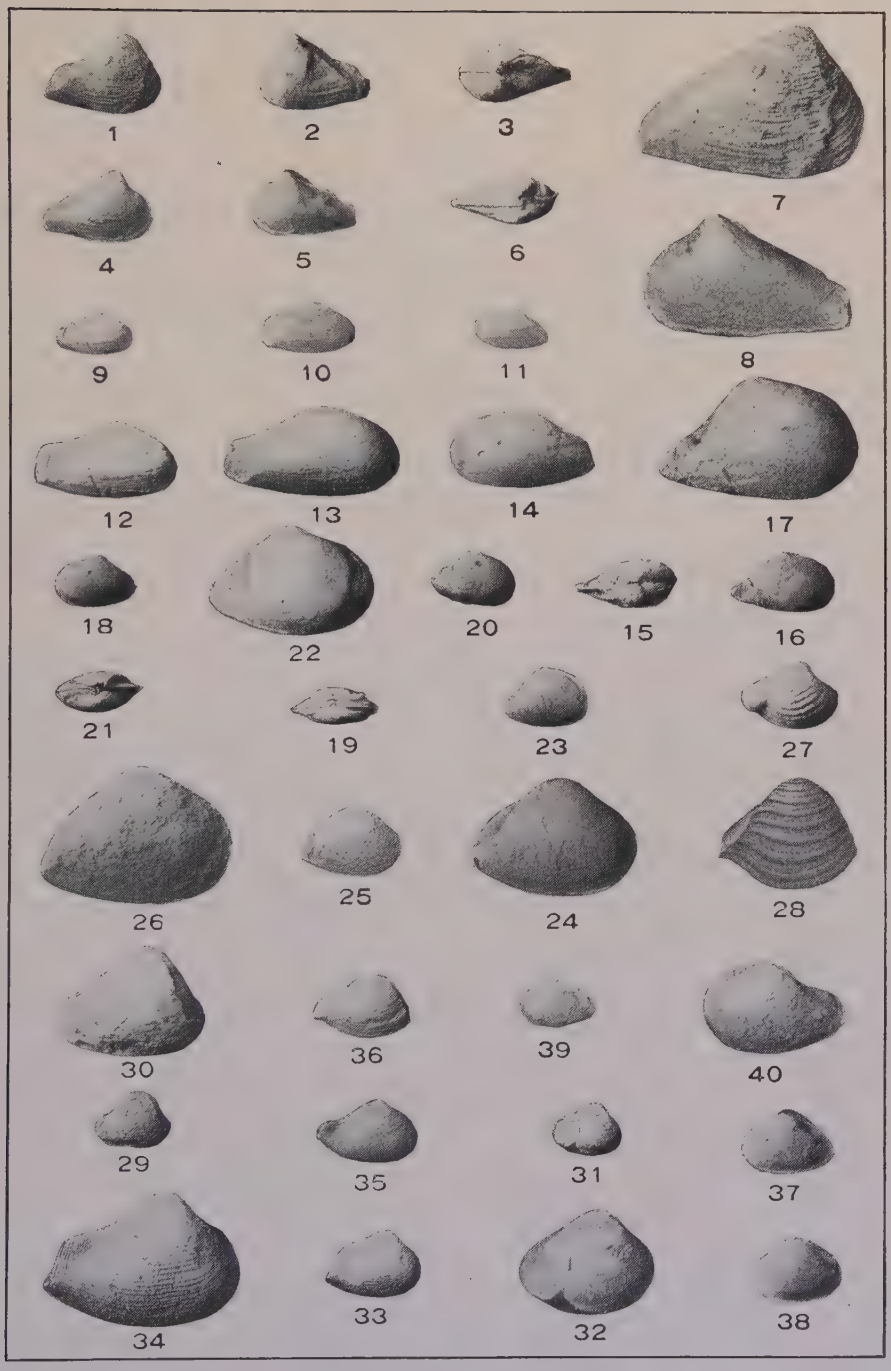
37–38. Lateral views of two internal casts.

Cliffwood clay; Cliffwood Point, (185).

39. Lateral view of the internal cast of a left valve.

40. The same, (x2).

Cliffwood clay; Cliffwood Point, (185).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PELECYPODA.

EXPLANATION OF PLATE LXXIII.

PANOPÆA ELLIPTICA Whitfield,.....p. 647

1–2. Lateral and cardinal views of a nearly complete internal cast.
Manasquan marl; Medford.

PANOPÆA DECISA Conrad,.....p. 646

3. Lateral view of an internal cast.
Merchantville clay-marl; near Matawan, (101).

4. View of an internal cast of a right valve.
Wenonah sand; near Marlboro, (130).

5. Lateral view of a small internal cast.
Navesink marl; near Crawfords Corner, (126').

RANGIA ? TENUIDENS (Whitfield),.....p. 635

6. Lateral view of one of the type specimens.

7–8. Lateral and anterior views of another of the type specimens.
Raritan clay; near Sayreville.

GASTROCHAENA LINGUIFORMIS n. sp.,.....p. 649

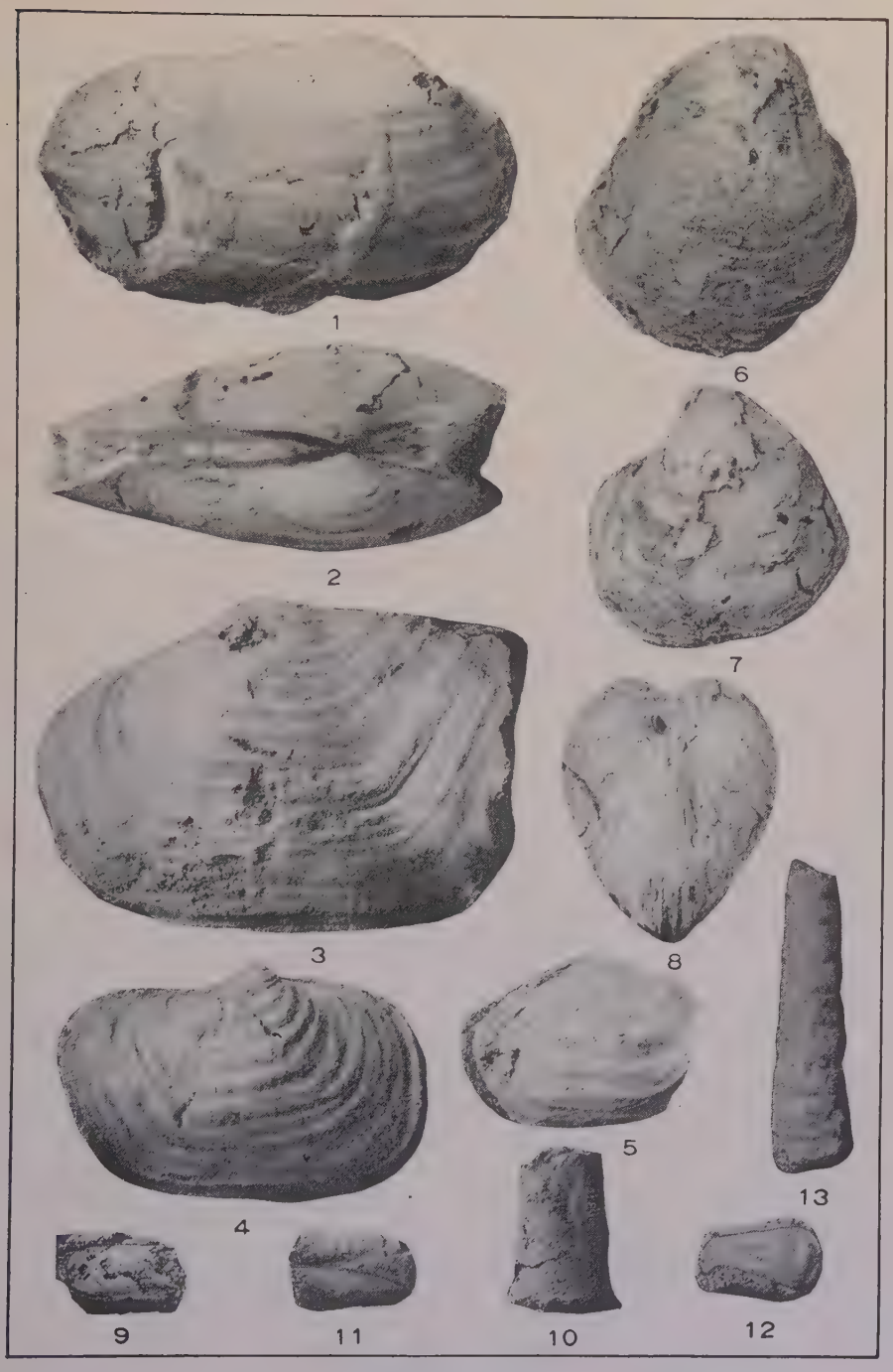
9. Right lateral view of the type specimen preserved in the cast of the tube.
Merchantville clay-marl; near Jamesburg, (140).

GASTROCHAENA WHITFIELDI n. sp., ...p. 648

10–12. View of the tube, and cardinal and lateral views of the included shell.
Navesink marl; near Walnford, Bruere's pits.

GASTROCHAENA AMERICANA Gabb,.....p. 649

13. View of the cast of a tube.
Vincentown limesand; New Egypt, (143).



PELECYPODA.

EXPLANATION OF PLATE LXXIV.

TEREDO IRREGULARIS Gabb,.....p. 656

1–2. Anterior and lateral views of a shell in position in its tube of habitation.

3. Mass of fossil wood with included tubes. The original of figures 1 and 2 was removed from this.

Merchantville clay-marl; Lenola, (163).

TURNUS KÜMMELI n. sp.,.....p. 652

4–5. Lateral views of two left valves.

6. The same as figure 5, (x2).

Marshalltown clay-marl; near Swedesboro, (177).

PHOLAS CITHARA Morton,.....p. 651

7. Lateral view of an internal cast.

Woodbury clay; Lorillard, (102).

MARTESIA CRETACEA Gabb,.....p. 654

8–9. Lateral and ventral views of an internal cast, (x2).

10–11. Lateral and cardinal views of an internal cast, (x2).

Marshalltown clay-marl; near Swedesboro, (177).

POLORTHUS TIBIALIS (Morton).....p. 659

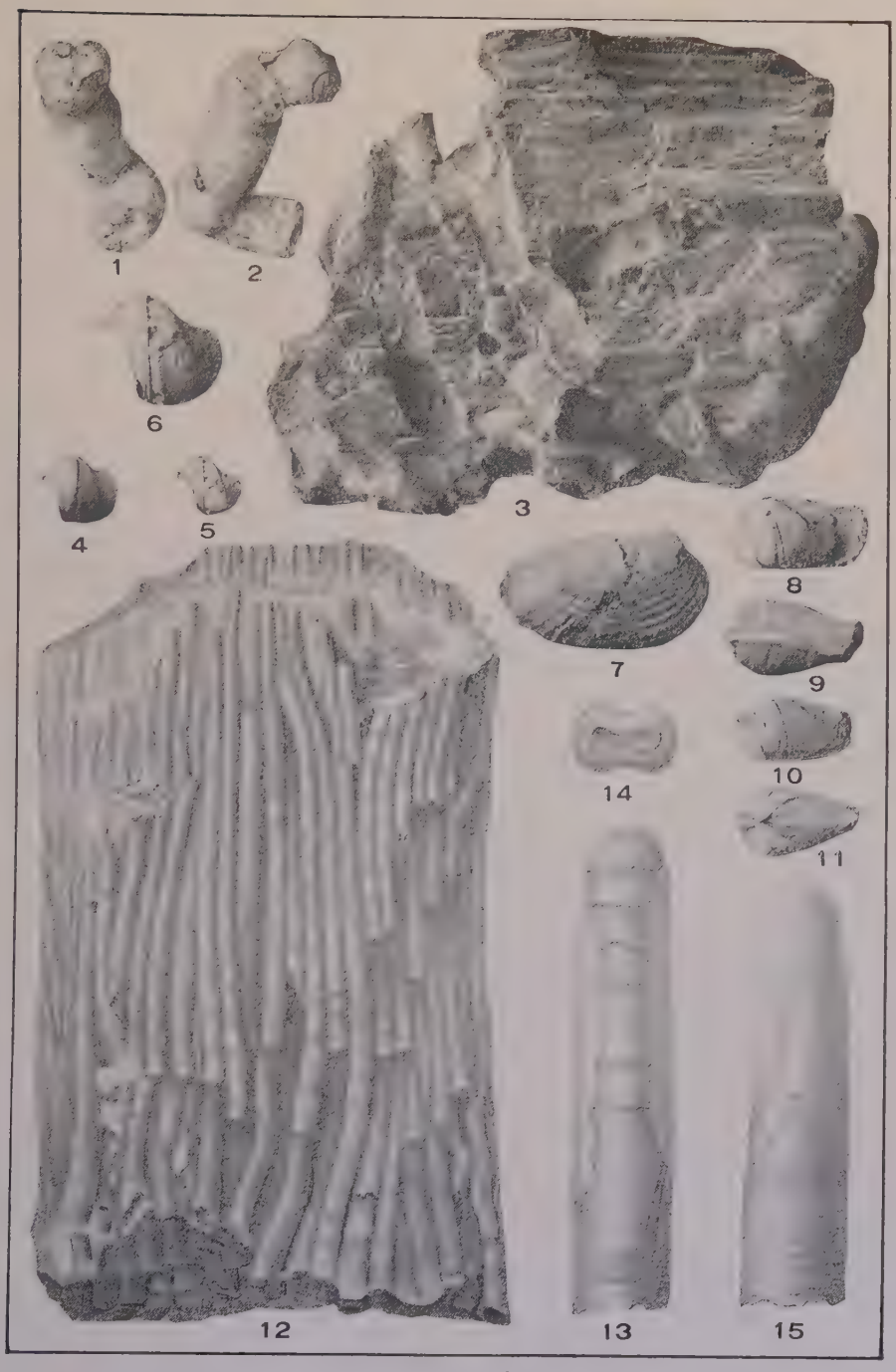
12. View of a group of the tube casts, showing their usual form. Nearly all have their lower ends broken off.

13. Enlarged view of the upper end of a tube showing the partial septa of this part of the tube.

14. Enlarged view of the aperture.

15. Enlargement of the upper end of a cast, showing the muscular scar. (All figures after Whitfield.)

Vincentown limesand.



PELECYPODA.

EXPLANATION OF PLATE LXXV.

DENTALIUM SUBARCUATUM Conrad,.....p. 661

1. View of a squeeze from a natural mould of the exterior.
2. View of an internal cast.

Woodbury clay; Lorillard, (102).

CADULUS OBNUTUS (Conrad), ...p. 663

3–4. Lateral views from different sides of two internal casts, (x2).

Woodbury clay; Lorillard, (102).

PATELLA TENTORIUM Morton,.....p. 663

5–6. Lateral and vertical views of the type specimen, (x2).

Navesink marl; near Arneytown.

PLEUROTOMARIA CROTALOIDES (Morton),.....p. 665

7–9. Vertical, basal and lateral views of an internal cast.

Navesink marl; near Crawfords Corner, (126[T]).

PLEUROTOMARIA BRITTONI Whitfield,.....p. 667

10–12. Lateral, vertical and basal views of the type specimen.

Manasquan marl; Farmingdale.

PLEUROTREMA SOLARIFORMIS Whitfield,.....p. 667

13–14. Lateral and basal views of one of Whitfield's type specimens.

Vincentown limesand; Timber Creek.

LEIOSTRACA CRETACEA (Conrad),.....p. 671

15. Lateral view of a specimen (x4).
16. Lateral view of a specimen (x4).
17. Lateral view of a specimen (x3).

Woodbury clay; Haddonfield, (183).

DELPHINULA NAVESINKENSIS n. sp.,.....p. 669

18–19. Vertical and lateral views of the type specimen.

Navesink marl; near Walnford, (49).

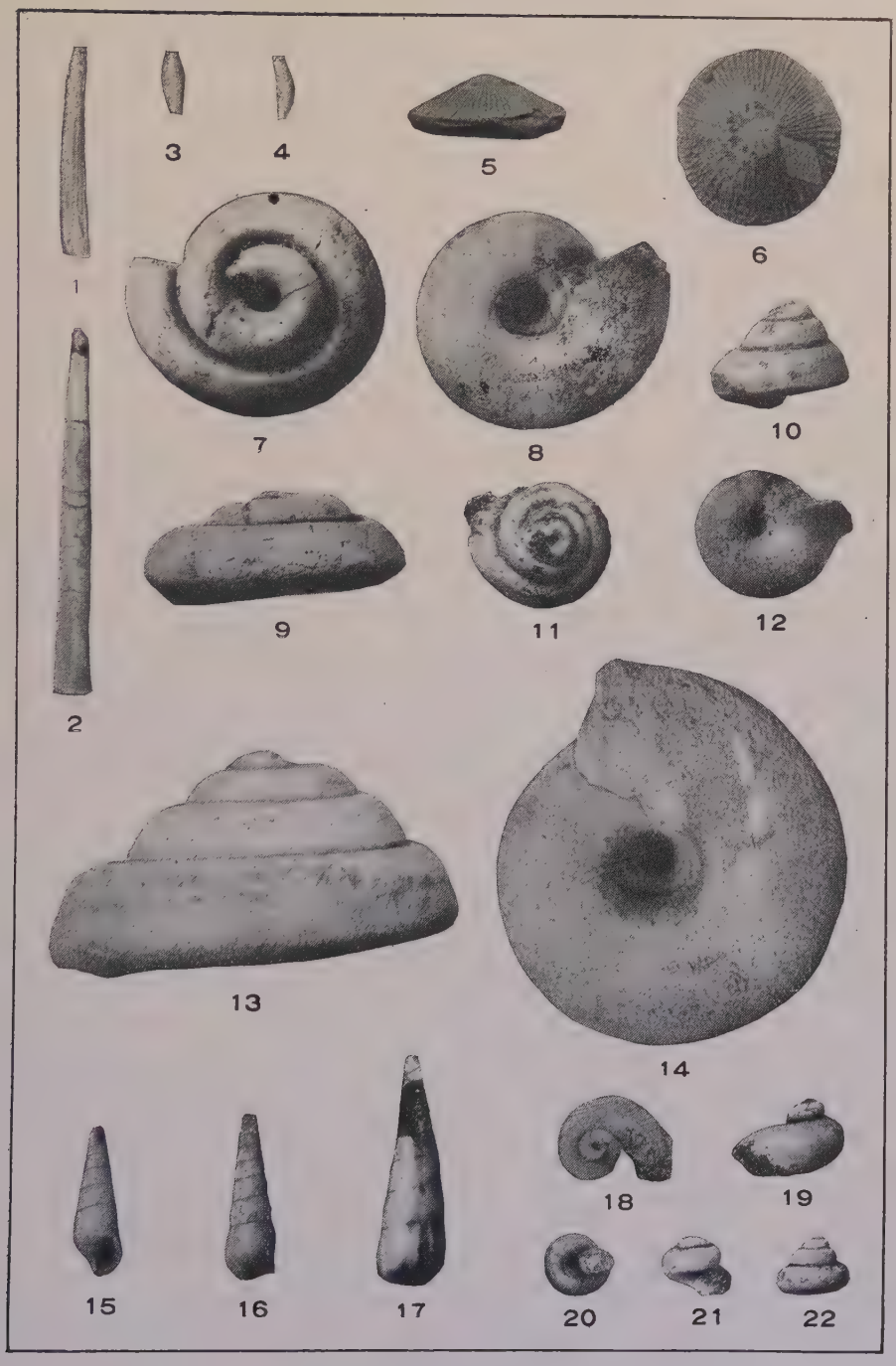
MARGARITA ABYSSINA (Gabb),.....p. 669

20–21. Basal and lateral views of an internal cast.

Merchantville clay-marl; Lenola, (163).

22. Lateral view of an internal cast.

Navesink marl; Middletown, (113).



GASTROPODA.

EXPLANATION OF PLATE LXXVI.

OBELISCUS CONELLUS Whitfield, ... p. 672

1. Lateral view of the type specimen, enlarged.
Woodbury clay; Haddonfield, (183).

SCALA SILLMANI (Morton), ... p. 672

2. Lateral view of a specimen from Alabama preserving the shell.
Pal. Coll. Walker Mus., No. 10,835.
3. Lateral view of an internal cast illustraed by Whitfield.
Navesink marl; Holmdel.

SCALA THOMASI Gabb ?, ... p. 674

4. Lateral view of the specimen illustrated by Whitfield.
Horizon and locality not known.

CAVOSCALA ANNULATA (Morton), ... p. 676

5–7. Two lateral views and a basal view from two nearly perfect specimens.
Vincentown limesand; Timber Creek.

SCALA ? HERCULES Whitfield, ... p. 675

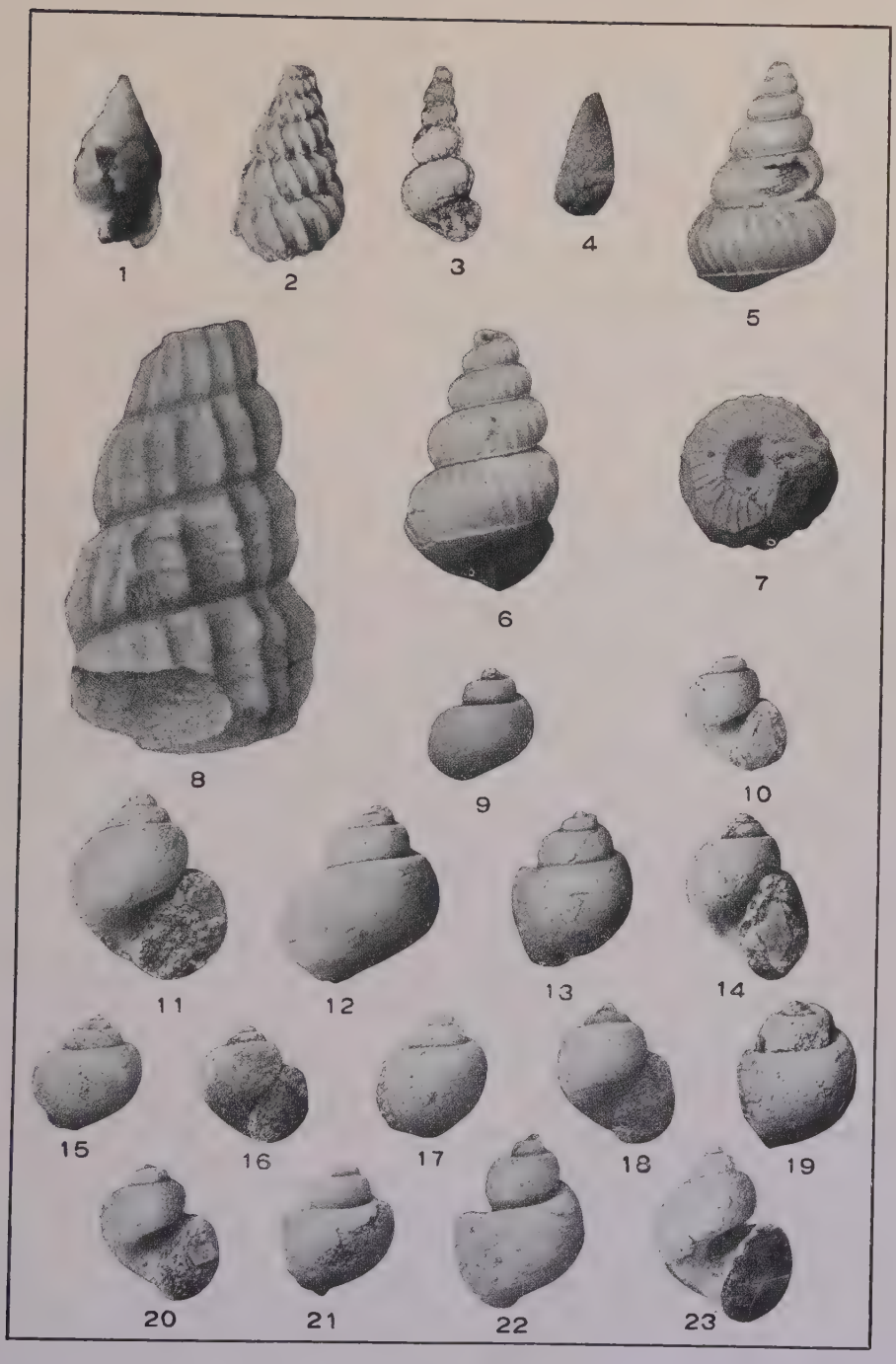
8. Lateral view of the type specimen. (After Whitfield.)
Cliffwood clay ?; Cliffwood Point.

LUNATIA HALLI Gabb, ... p. 677

9–10. Two views of an internal cast.
Merchantville clay-marl; Lenola, (163).
11–14. Two views each of two specimens.
Navesink marl; Mullica Hill, (169).
15–16. Two views of one specimen.
17–19. Views of three different specimens.
Wenonah sand; near Crawfords Corner, (126[3]).

LUNATIA ? PAUPERATA (Whitfield), ... p. 680

20–23. Two lateral views each of the two type specimens.
Navesink marl; Crosswicks Creek.



GASTROPODA.

EXPLANATION OF PLATE LXXVII.

AMAUROPSIS MEEKANA Whitfield, ... p. 681

1–2. Two lateral views of an internal cast.

3. Lateral view of another internal cast.

Woodbury clay; Lorillard, (102).

AMAUROPSIS PUNCTATA (Gabb), ... p. 682

4–6. Lateral views of three specimens, fig. 6 being that of the type specimen.

Navesink marl; Mullica Hill.

GYRODES ABYSSINA (Morton), ... p. 683

7–9. Lateral, vertical and basal view of an internal cast.

Navesink marl; Mullica Hill (169).

GYRODES CRENATA Conrad, ... p. 685

10–12. Lateral, vertical and basal views of an internal cast.

Merchantville clay-marl; Lenola, (163).

GYRODES PETROSUS (Morton), ... p. 689

13–15. Lateral, vertical and basal views of an internal cast.

Navesink marl; Middletown, (113).

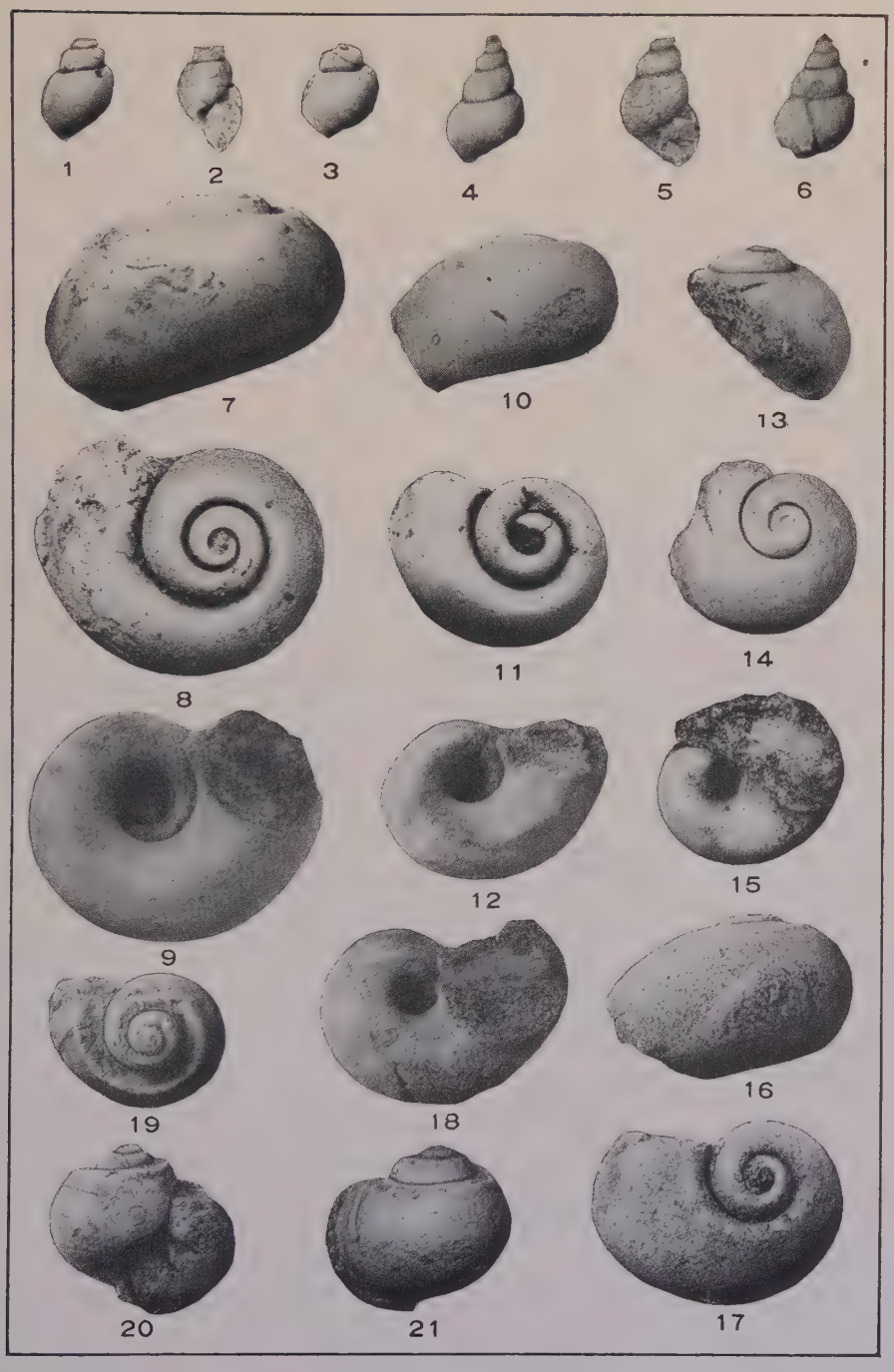
16–18. Lateral, vertical and basal views of an internal cast.

Wenonah sand; near Crawfords Corner, (126[3]).

GYRODES ALTISPIRA (Gabb), ... p. 687

19–21. Vertical and two lateral views of an internal cast.

Merchantville clay-marl; Lenola, (163).



GASTROPODA.

EXPLANATION OF PLATE LXXVIII.

XENOPHORA LEPROSA (Morton),.....p. 690

1–3. Lateral, vertical and basal views of an internal cast.
Navesink marl; Atlantic Highlands.

ENDOPTYGMA UMBILICATA (Tuomey),.....p. 692

4–6. Lateral, basal and vertical views of an internal cast.
Merchantville clay-marl; Lenola, (163).

TURRITELLA QUADRILIRA Johnson, ...p. 695

7. Lateral view of a plaster cast from a natural mould.
Cliffwood clay; Cliffwood Point, (105).

TURRITELLA LENOLENSIS n. sp.,.....p. 698

8. Lateral view of a plaster cast from a natural mould.
Merchantville clay-marl; Lenola, (163).

TURRITELLA sp.,

9. Lateral view of an internal cast.
Manasquan marl; Farmingdale.

TURRITELLA ENCRINOIDES Morton,.....p. 694

10–11. Lateral views of two internal casts illustrated by Whitfield.
Navesink marl.

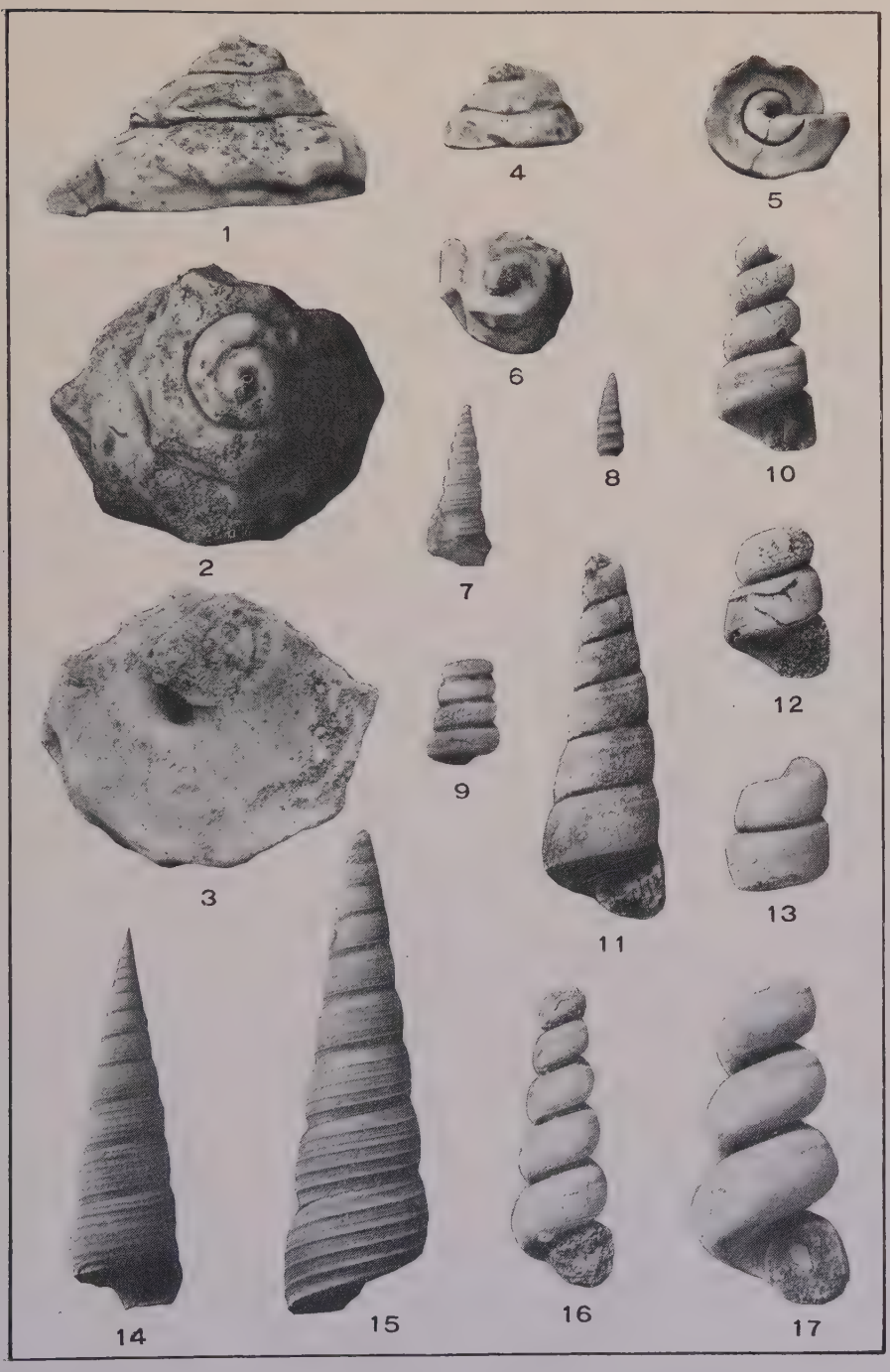
12–13. Lateral views of two fragmentary internal casts.
Navesink marl; near Walnford, (149).

TURRITELLA VERTEBROIDES Morton,.....p. 693

14–15. Lateral views of two specimens from Eufaula, Alabama, preserving the shell.
Coll. U. S. Nat. Mus., No. 21,128.

16. Lateral view of an internal cast.
Navesink marl; near Walnford, (149).

17. Lateral view of a large internal cast illustrated by Whitfield.
Navesink marl.



GASTROPODA.

EXPLANATION OF PLATE LXXIX.

TURRITELLA LIPPINCOTTI Whitfield,.....p. 698

1. Lateral view of one of the type specimens.

Navesink marl; Holmdel.

TURRITELLA JERSEYENSIS n. sp.,.....p. 702

2. Lateral view of an internal cast.
3. Lateral view of a plaster cast from a part of the natural mould of the same.

Cliffwood clay; Cliffwood Point, (185).

TURRITELLA TRILIRA Conrad,.....p. 699

4. Lateral view of a specimen from Eufaula, Alabama, preserving the shell.

Coll. U. S. Nat. Mus., No. 21,123.

5. View of a plaster cast from a natural mould of the exterior.

Wenonah sand; near Crawfords Corner, (126[3]).

TURRITELLA TIPPANA Conrad,.....p. 700

6. Lateral view of a specimen from Ripley, Mississippi, preserving the shell.

Coll. U. S. Nat. Mus., No. 20,419.

7. An imperfect specimen preserving the shell.

Marshalltown clay-marl; near Swedesboro, (177).

TURRITELLA sp.

8. Lateral view of an internal cast.
9. Lateral view of a plaster cast from a natural mould of the exterior.

Wenonah sand; near Crawfords Corner, (126[3]).

TURRITELLA LORILLARDENSIS n. sp.,.....p. 703

10. Lateral view of a plaster cast from a natural mould.

11–12. Lateral views of two imperfect internal casts.

Woodbury clay; Lorillard, (102).

TURRITELLA MERCHANTVILLENSIS n. sp.,.....p. 704

13. Lateral view of a plaster cast from a natural mould.

Merchantville clay-marl; near Jamesburg, (140).

TURRITELLA MARSHALLTOWNENSIS n. sp.,.....p. 705

14. Lateral view of a specimen preserving the shell.

Marshalltown clay-marl; near Swedesboro, (177).

TURRITELLA GRANULICOSTA Gabb,.....p. 696

15–16. Two lateral views of the type of *T. compacta* Whitf.

17. Lateral view of the type of *T. granulicosta* Gabb.

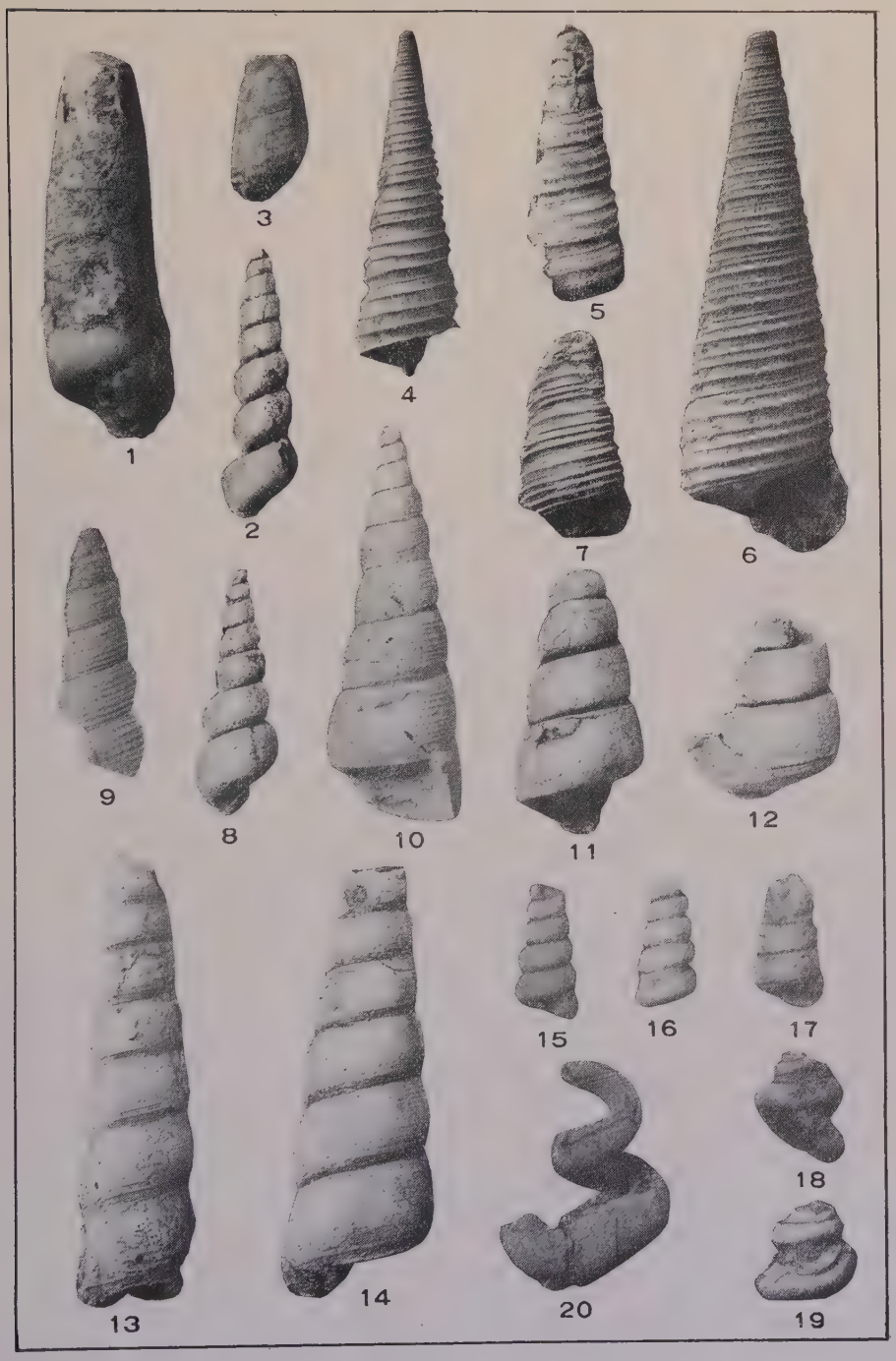
Navesink marl ?.

SILIQUARIA PAUPERATA Whitfield,.....p. 705

18–19. Two lateral views of one of the type specimens.

20. Lateral view of another of the type specimens, (x2).

Navesink marl.



GASTROPODA.

EXPLANATION OF PLATE LXXX.

1. Slab of sandstone containing casts of *Turritella* sp., and a mould of a small pelecypod shell, probably *Cymbophora lintea*.

Raritan; Sayreville.

1

GASTROPODA.

EXPLANATION OF PLATE LXXXI.

LAXISPIRA LUMBRICALIS Gabb, ... p. 706

1. Lateral view of a squeeze from a natural mould.
2. Lateral view of the internal cast of the same.

Woodbury clay; Lorillard, (102).

CERITHIUM PILSBRYI Whitfield, ... p. 708

3–4. Lateral views of two plaster casts from natural moulds of the exterior.

5. Lateral view of an internal cast.

Merchantville clay-marl; Lenola, (163).

ANCHURA SOLITARIA Whitfield, ... p. 714

6. Lateral view of a nearly perfect specimen.

Merchantville clay-marl; near Jamesburg, (141).

ANCHURA ROSTRATA (Gabb), ... p. 709

7. Lateral view of a specimen showing the form of the expanded aperture.

Merchantville clay-marl; Lenola, (163).

8. Lateral view of a specimen showing the expanded aperture.

Merchantville clay-marl; near Matawan, (101).

9. Lateral view of a specimen referred doubtfully to this species.

Wenonah sand; near Crawfords Corner, (126[3]).

ANCHURA PENNATA (Morton), ... p. 711

10. Lateral view of a specimen showing the expended aperture.

Navesink marl; Holmdel.

11. Lateral view of a specimen whose expanded aperture is partially preserved.

Navesink marl; Mullica Hill, (169).

12–13. Two lateral views of the type specimen of *A. compressa* Whitf.

Navesink marl; Upper Freehold.

14–15. Two lateral views of an incomplete internal cast.

Navesink marl; Middletown, (113)

16–17. Two lateral views of an incomplete internal cast.

Navesink marl; Mullica Hill, (169).

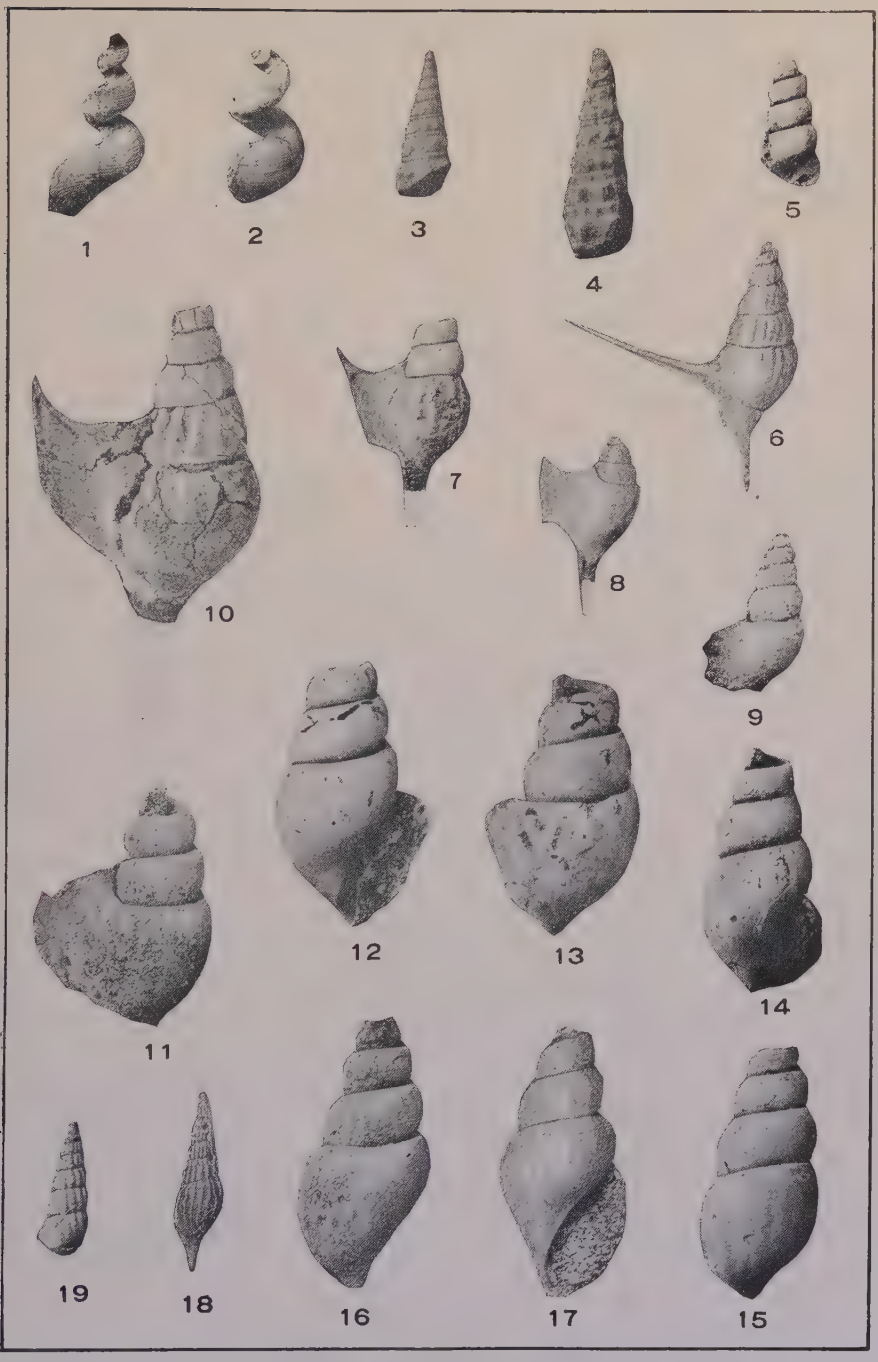
ANCHURA PERGRACILIS Johnson, ... p. 713

18. Lateral view of a squeeze from a natural mould of the exterior.

Woodbury clay; near Matawan, (101).

19. Lateral view of a plaster cast from a natural mould, doubtfully referred to this species.

Cliffwood clay; Cliffwood Point, (185).



GASTROPODA.

EXPLANATION OF PLATE LXXXII.

ANCHURA ABRUPTA Conrad, ... p. 715

1–2. Two lateral views of the type of *Rostellaria nobilis* Whitf.
Navesink marl ?; no locality.

3–4. Two lateral views of the type of *Anchura pagodaformis* Whitf.
Navesink marl; Monmouth County.

5–6. Two lateral views of the type of *Rostellaria hebe* Whitf.
Navesink marl; Mullica Hill.

GASTROPODA.

EXPLANATION OF PLATE LXXXIII.

PETROCERELLA TIPPANA (Conrad), ... p. 718

1. Lateral view of a very perfect specimen from Texas.
Chatfield, Texas, Pal. Coll. U. S. Nat. Mus., No. 20,994.

2. Lateral view of a small internal cast.
Wenonah sand; near Crawfords Corner, (126[3]).

ANCHURA ABRUPTA Conrad, ... p. 715

3–4. Lateral views of two small, incomplete internal casts.
Navesink marl; near Crawfords Corner, (126[7]).

ANCHURA ARENARIA (Morton), ... p. 717

5. Lateral view of the type specimen.
Navesink marl.

PUGNELLUS DENSATUS Conrad, ... p. 720

6. Lateral view of an internal cast referred to this species.
Wenonah sand; near Crawfords Corner, (126[3]).

TURBINOPSIS ? MAJOR Whitfield, ... p. 799

7–8. Two lateral views of the type specimen.
Navesink marl; Navesink hills.

ROSTELLARIA CURTA Whitfield, ... p. 721

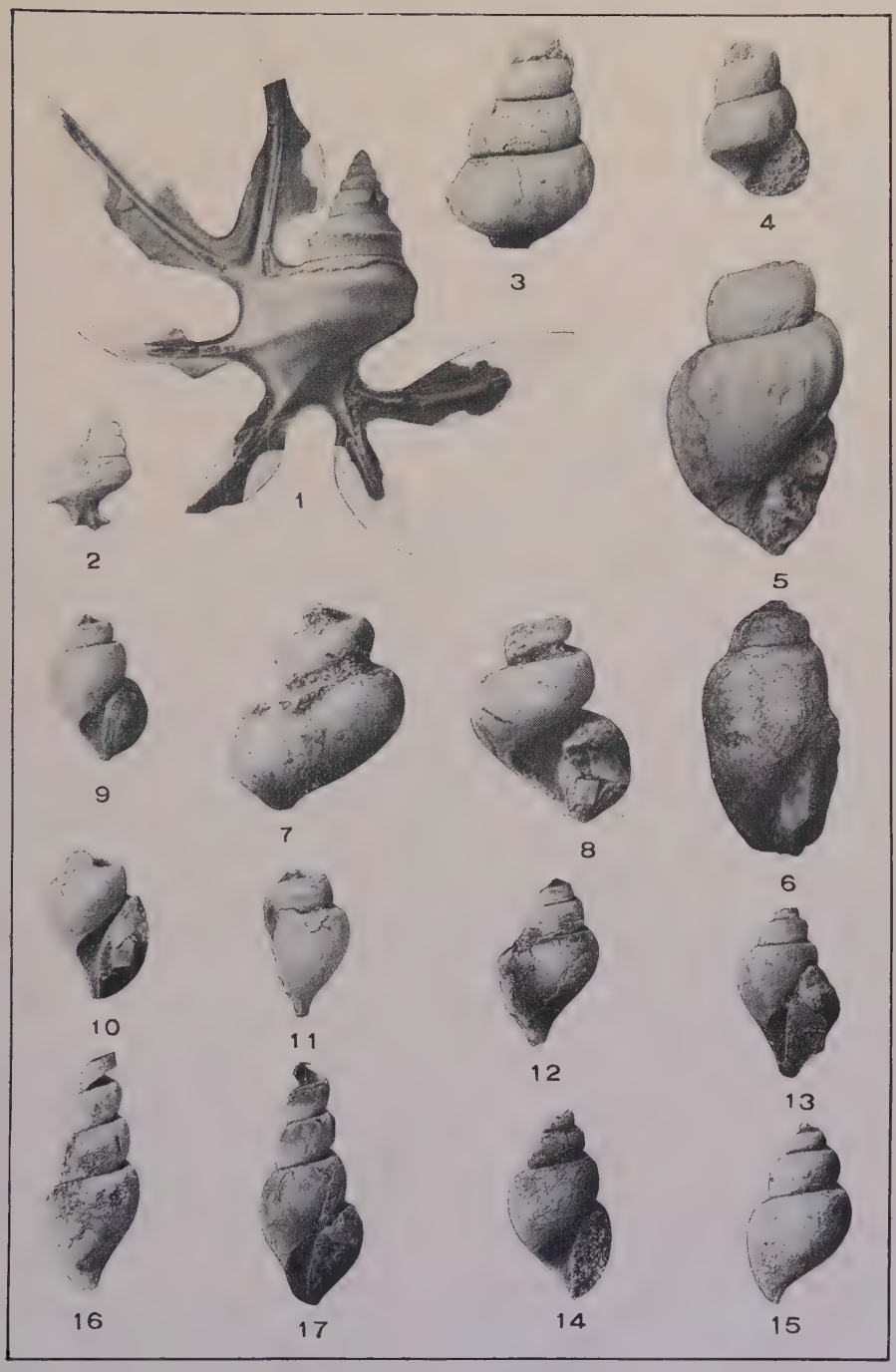
9, 10–11, 12–13. Lateral views of the three type specimens.
Navesink marl; Crosswicks Creek.

TURBINOPSIS ? ELEVATA Whitfield, ... p. 797

14–15. Two lateral views of a nearly complete internal cast.
Navesink marl; Mullica Hill, (169).

ROSTELLARIA FUSIFORMIS Whitfield, ... p. 722

16–17. Two lateral views of the type specimen.
Navesink marl; Crosswicks creek.



GASTROPODA.

EXPLANATION OF PLATE LXXXIV.

CYPRAEA MORTONI Gabb,.....p. 722

1–2. Two views of an internal cast.

Navesink marl; Atlantic Highlands.

PYRULA PRECEDENS (Whitfield),.....p. 724

3–4. Two lateral views of the type specimen. (After Whitfield.)

Navesink marl; near Holmdel.

TRITON LORILLARDENSIS n. sp.,.....p. 725

5–6. Two lateral views of the type specimen, the spire partially restored.

Woodbury clay; Lorillard, (102).

TRITON PRAECEDENS Whitfield,.....p. 726

7–8. Two lateral views of the type specimen.

Navesink marl; Mullica Hill.

TRACHYTRITON ? HOLMDELENSE Whitfield,.....p. 728

9–10. Two lateral views of the type specimen. (After Whitfield.)

Navesink marl; Holmdel.

TRACHYTRITON ATLANTICUM Whitfield,.....p. 727

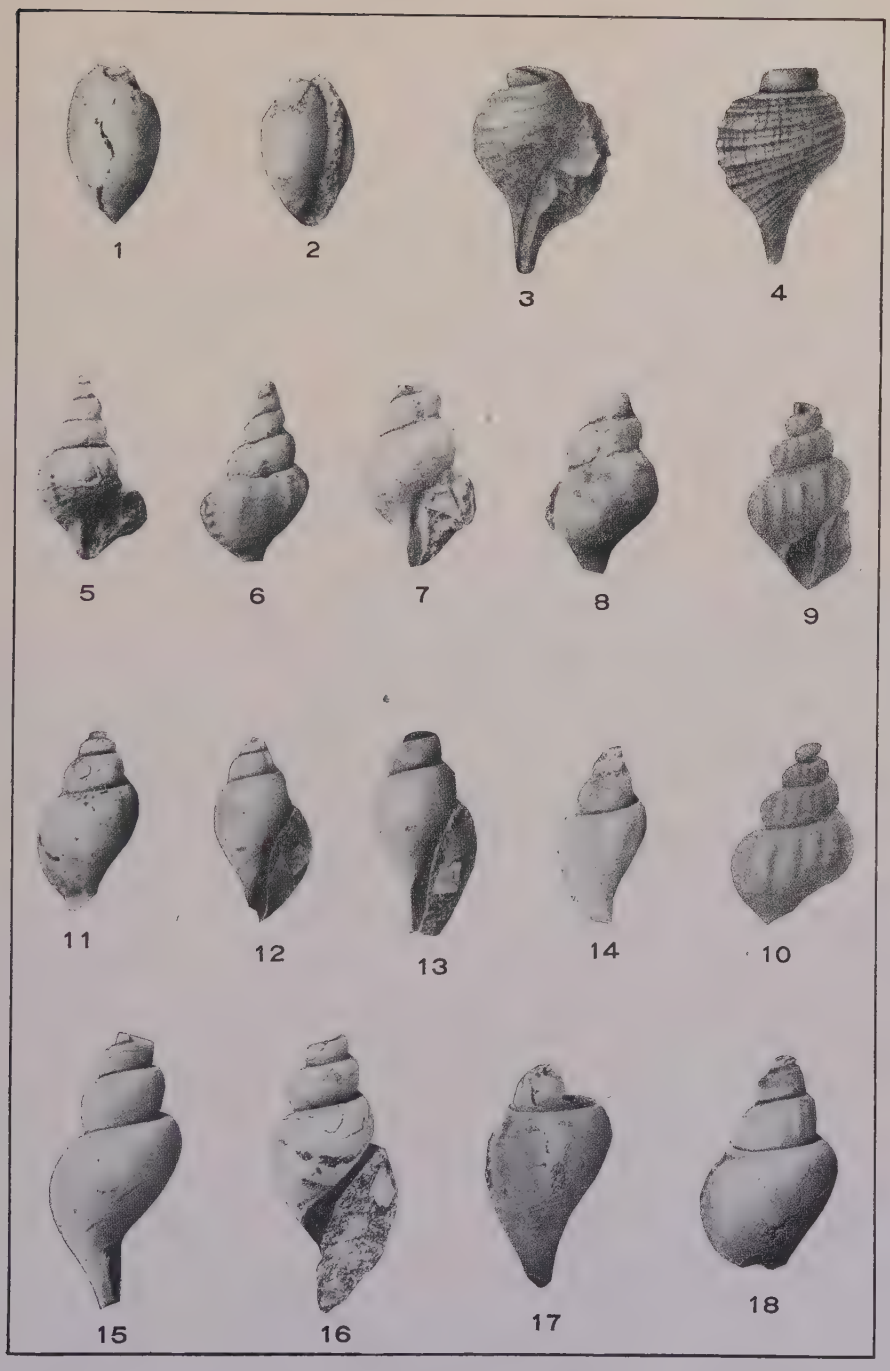
11–12, 13, 14. Lateral views of the three type specimens.

Navesink marl; Crosswicks Creek.

TRACHYTRITON ? MULTIVARICOSUM Whitfield,.....p. 729

15–16, 17, 18. Lateral views of the three type specimens.

Navesink marl; Crosswicks Creek.



GASTROPODA.

EXPLANATION OF PLATE LXXXV.

PERISSOLAX DUBIA (Gabb),.....p. 730

1. Lateral view of an internal cast.

Navesink marl; Mullica Hill.

2–3. Two lateral views of an internal cast.

Navesink marl; near Crawfords Corner, (126').

4–5. Two lateral views of one of the types of *Tritonidea obesa* Whitf.

Navesink marl; Crosswicks Creek.

PERISSOLAX TRIVOLVA Gabb,.....p. 731

6. Lateral view of the type specimen.

Vincentown limesand, Timber Creek.

PYRIFUSUS MEEKI Whitfield,.....p. 732

7–8. Two lateral views of a nearly perfect internal cast. One of the type specimens.

Navesink marl; Mullica Hill.

PYRIFUSUS MULLICAENSIS (Gabb),.....p. 733

9. Lateral view of an internal cast.

10–11. Two lateral views of another internal cast.

Navesink marl; Mullica Hill.

12–13. Two lateral views of the type specimen of *Pyrifusus cuneus* Whitf.

Navesink marl; Freehold.

14–15. Two lateral views of the type specimen of *Eripachya paludinaformis* Whitf.

Navesink marl; Crosswicks Creek.

PYRIFUSUS ERRATICUS Whitfield,.....p. 736

16. Lateral view of an internal cast.

Cliffwood clay; Cliffwood Point, (105).

PYRIFUSUS MACFARLANDI Whitfield,.....p. 735

17. Lateral view of an internal cast.

Navesink marl; Mullica Hill, (169).

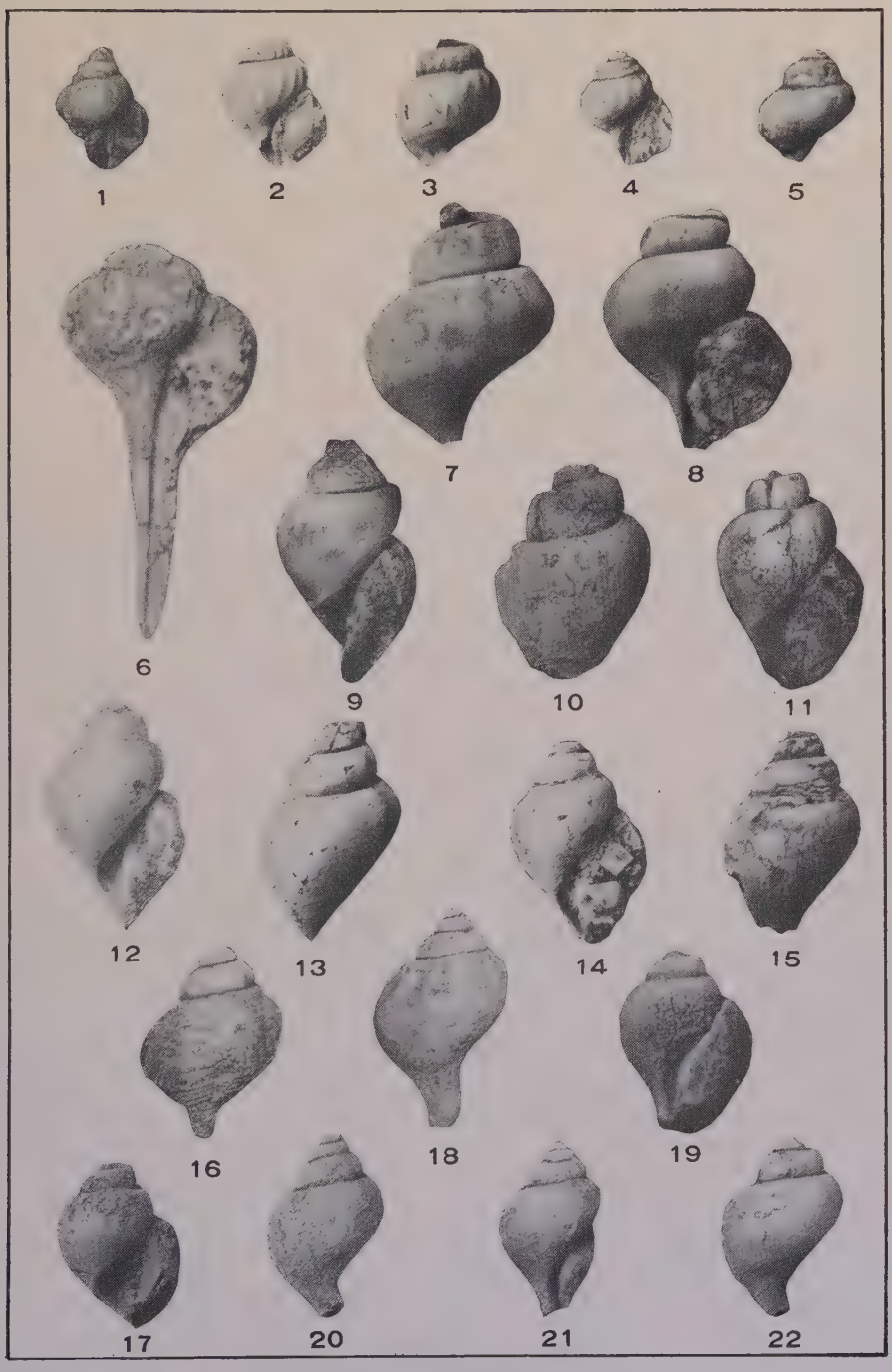
HERCORHYNCHUS JERSEYENSIS n. sp.,.....p. 737

18. Plaster cast of a natural mould of the exterior of this species.

19–20. Two lateral views of the internal cast of the same individual.

21–22. Two lateral views of another internal cast.

Cliffwood clay; Cliffwood Point, (185).



GASTROPODA.

EXPLANATION OF PLATE LXXXVI.

NASSA GLOBOSA Gabb,.....p. 738

1. Lateral view of a somewhat crushed internal cast.
Wenonah sand; near Marlboro, (130).

PYROPSIS RICHARDSONI (Tuomey),.....p. 739

2. Lateral view of a small internal cast.
Navesink marl; Atlantic Highlands, (108).

3–4. Lateral and vertical views of a plaster cast from a natural mould partially showing the external characters of the shell.

5. Lateral view of the internal cast of the same individual.
Merchantville clay-marl; near Matawan, (101).

PYROPSIS PYRULOIDEA (Gabb),.....p. 742

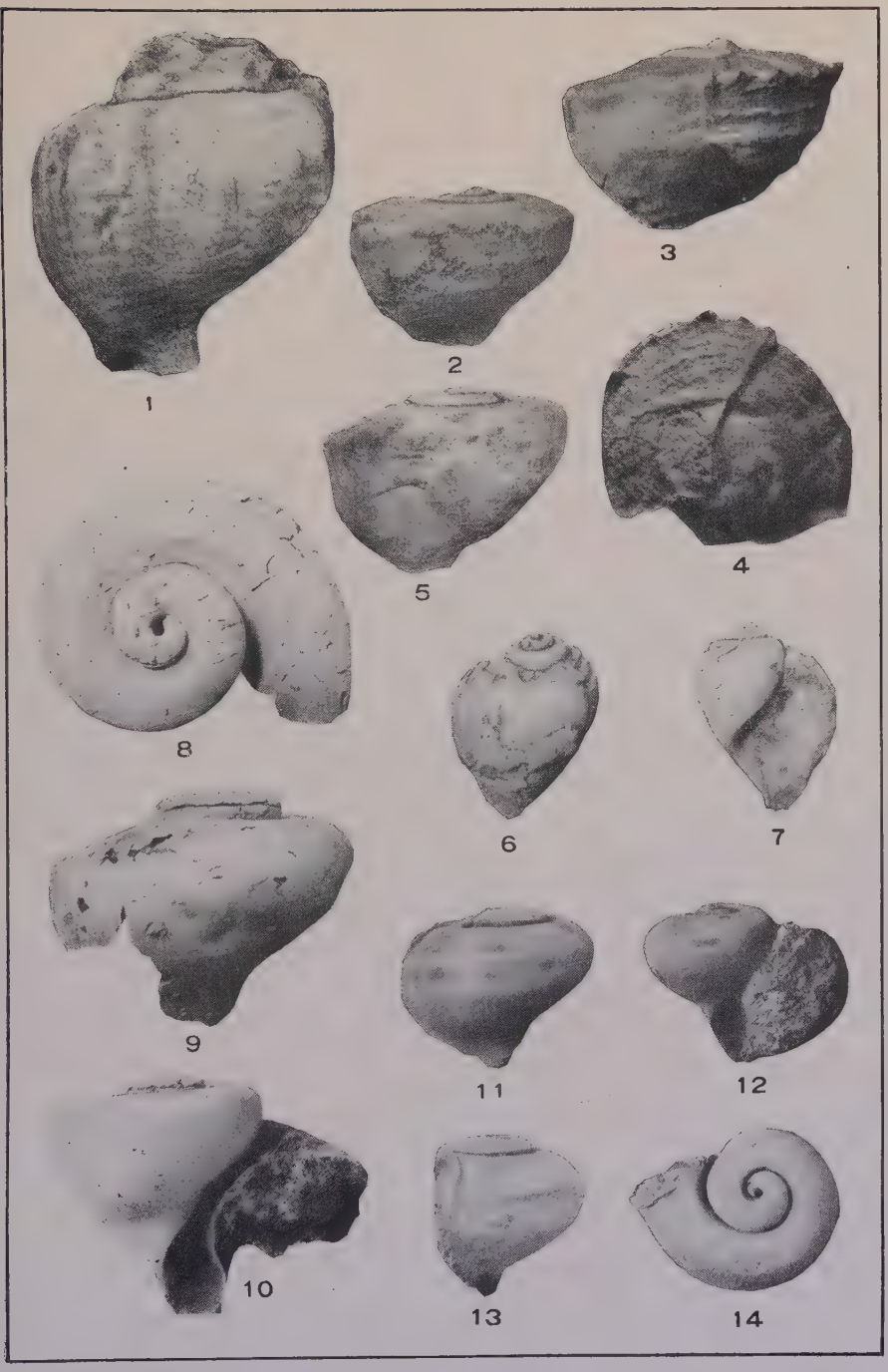
6–7. Two lateral views of the type specimen.
Navesink marl; Burlington County.

PYROPSIS SEPTEMLIRATA Gabb,.....p. 744

8–10. Vertical and two lateral views of an internal cast, illustrated as *P. perlata* by Whitfield.
Navesink marl; Freehold.

PYROPSIS PLANIMARGINATA (Whitfield),.....p. 745

11–14. Three lateral views and one vertical view of the type specimen.
Navesink marl; Crosswicks Creek.



GASTROPODA.

EXPLANATION OF PLATE LXXXVII.

PYROPSIS TROCHIFORMIS (Tuomey),.....p. 746

1–3. Two lateral views and a vertical view of a specimen illustrated by Whitfield as *P. reileyi.*

Navesink marl; Holmdel.

4–6. Two lateral views of one specimen and a vertical view of another individual.

Navesink marl; Mullica Hill, (169).

7–9. Two lateral views and a vertical view of a specimen illustrated by Whitfield as *P. richardsoni.*

Navesink marl; Monmouth County.

10. Lateral view of a specimen partially preserving the shell.

Marshalltown clay-marl; near Swedesboro, (177).

11. Lateral view of a specimen illustrated by Whitfield partially preserving the external characters.

Navesink marl.

GASTROPODA.

EXPLANATION OF PLATE LXXXVIII.

PYROPSIS SEPTEMLIRATA Gabb, ... p. 744

1–2. Lateral and vertical views of a plaster cast from a natural mould, showing some of the external features of the shell.

3–4. Lateral and vertical views of the internal cast of the same individual.

Navesink marl; Mullica Hill, (169).

PYROPSIS ? OBESA Whitfield, ... p. 748

5–6. Two lateral views of the type specimen. (After Whitfield.)

Navesink marl; Mullica Hill.

PYROPSIS RETIFER (Gabb), ... p. 749

7–9. Vertical, and two lateral views of a nearly complete internal cast.

Navesink marl.

10–11. Two vertical views of the type specimen of *Dolium multiliratum* Whitf.

Navesink marl; Freehold.

12–13. Two lateral views of an internal cast.

Wenonah sand; near Crawfords Corner, (126[3]).

PYROPSIS WHITFIELDI n. sp., ... p. 750

14–16. Two lateral views and a vertical view of the type specimen. Illustrated by Whitfield as *P. octolirata* Con.

Navesink marl; near Walnford.

PYROPSIS OCTOLIRATA (Conrad), ... p. 751

17. Lateral view of a plaster cast from a natural mould, showing the external characters of the shell.

18. Internal cast of the same individual.

Woodbury clay; Lorillard, (102).

PYROPSIS sp.

19. Lateral view of a somewhat distorted individual.

Red Bank sand; Shrewsbury River, (119).

PYROPSIS LENOLENSIS n. sp., ... p. 752

20. Lateral view of a distorted individual showing the elongate anterior canal.

21–22. Two lateral views of an internal cast.

23–24. Lateral and vertical views of a plaster cast from a natural mould of the same individual.

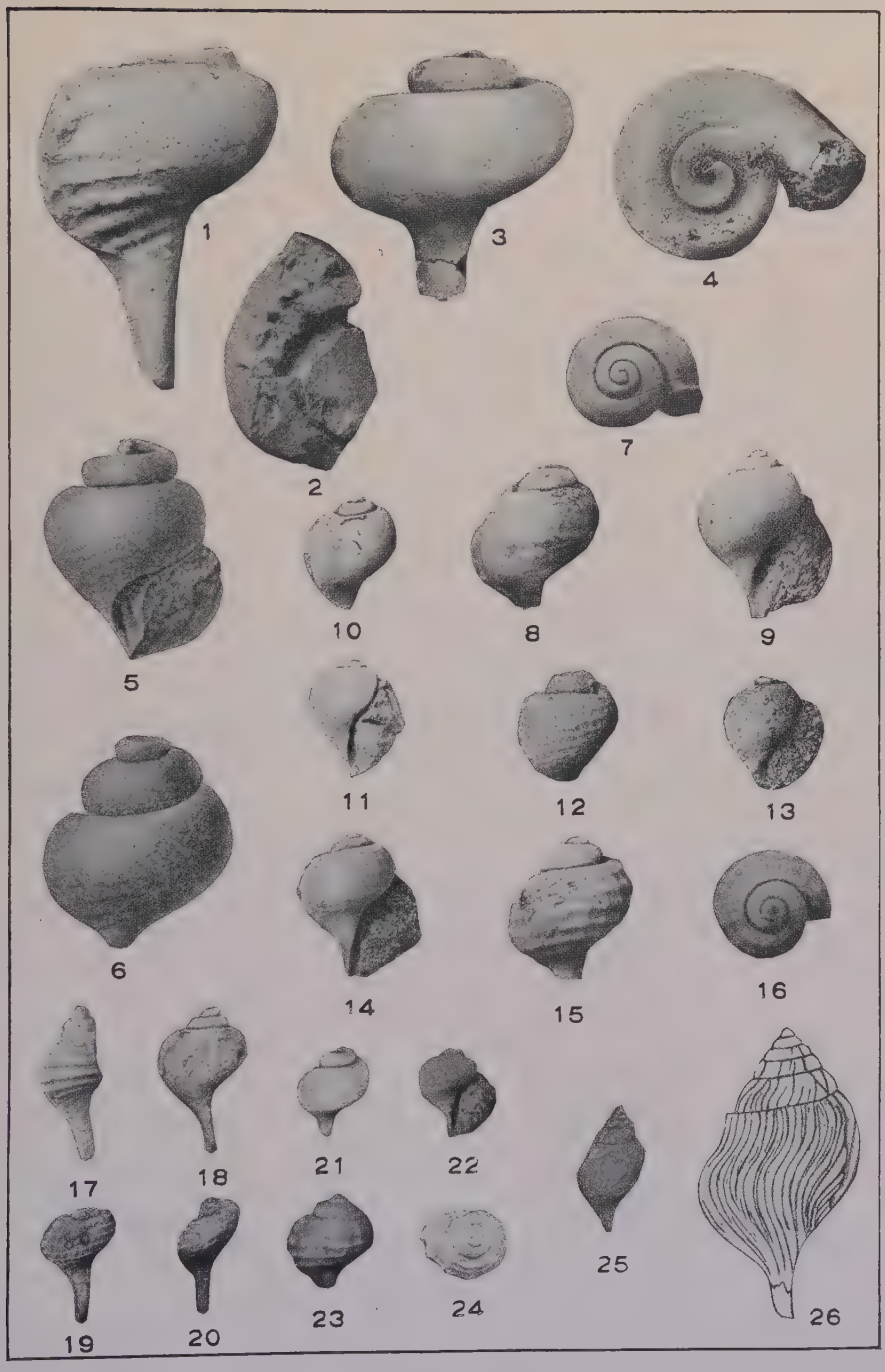
Merchantville clay-marl; Lenola, (163).

EUTHRIA ? FRAGILIS Whitfield, ... p. 753

25. Lateral view of the type specimen.

26. Enlarged outline view of the same. (After Whitfield.)

Woodbury clay; Haddonfield, (183).



GASTROPODA.

EXPLANATION OF PLATE LXXXIX.

RAPANA STANTONI n. sp., ... p. 754

1–3. Two lateral views and a vertical view of the type specimen.
Chatfield, Texas, Coll. U. S. Nat. Mus., No. 21,070.

FUSUS HOLMESIANUS Gabb, ... p. 755

4. Lateral view of a plaster cast from a natural mould of the exterior.
Wenonah sand; near Crawfords Corner, (126[3]).

FUSUS sp.

5. Lateral view of a plaster cast from a natural mould of the exterior.
Wenonah sand; near Crawfords Corner, (126[3]).

FUSUS CLIFFWOODENSIS n. sp., ... p. 756

6–7. Two lateral views of a plaster cast from a natural mould of the exterior.
Cliffwood clay, near Matawan, (107).

CRYPTORHYTIS OBLIQUICOSTATA Gabb, ... p. 759

8. Squeeze from a natural mould preserving some of the external characters of this species.
Woodbury clay; Lorillard, (102).

FUSUS LORILLARDENSIS n. sp., ... p. 758

9. Lateral view of a plaster cast from a natural mould of the exterior.

10. Lateral view of the incomplete internal cast of the same individual.
Woodbury clay; Lorillard, (102).

FUSUS HOLMDELENSIS Whitfield, ... p. 757

11–12. Two lateral views of the type specimen.
Navesink marl; Holmdel.

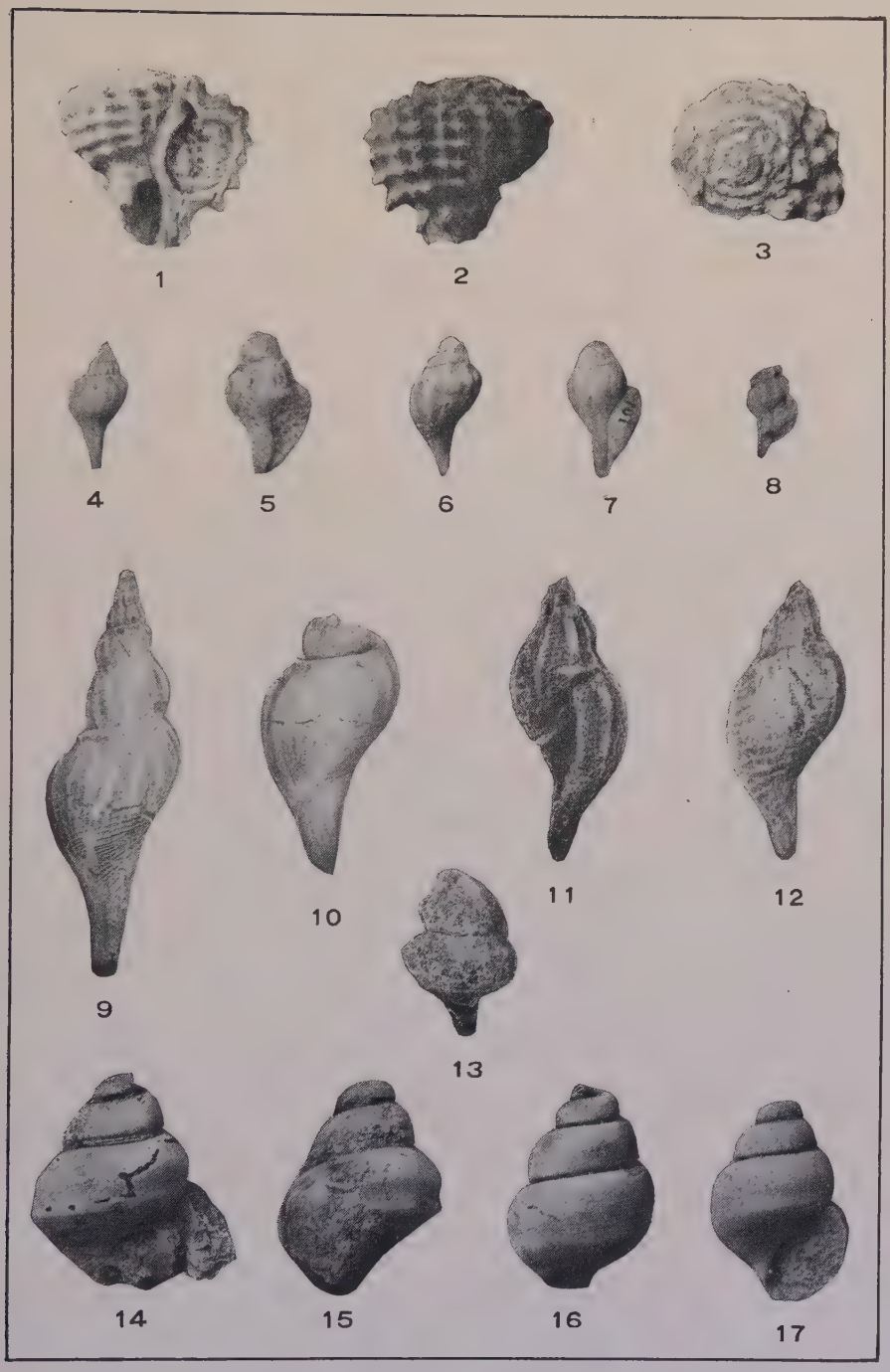
SERRIFUSUS NODOCARINATUS Whitfield, ... p. 760

13. Lateral view of the type specimen.
Navesink marl; Holmdel.

SERRIFUSUS CROSSWICKENSIS Whitfield, ... p. 761

14–15. Two lateral views of the type specimen.
Navesink marl; Crosswicks Creek.

16–17. Two lateral views of another internal cast.
Navesink marl; Atlantic Highlands.



GASTROPODA.

EXPLANATION OF PLATE XC.

ODONTOFUSUS MEDIANS Whitfield, ... p. 761

1–2, 3. Lateral views of the type specimens illustrated by Whitfield.
Navesink marl.

4–5. Two lateral views of a larger internal cast.
Navesink marl; near Walnford, (149).

6. Lateral view of a shell referred to this species.
Ripley, Mississippi, Coll. U. S. Nat. Mus., No. 20,400.

ODONTOFUSUS TYPICUS Whitfield, ... p. 763

7–12. Two lateral views each of three type specimens used by Whitfield.
Navesink marl; Crosswicks Creek.

13–14. Two lateral views of an internal cast.
Navesink marl, near Crawfords Corner, (126[7]).

15–16. Two lateral views of a specimen retaining part of the shell.
Navesink marl; Mullica Hill, (169).

ODONTOFUSUS SLACKI (Gabb), ... p. 766

17. Lateral view of a somewhat distorted internal cast.
Merchantville clay-marl; Lenola, (163).

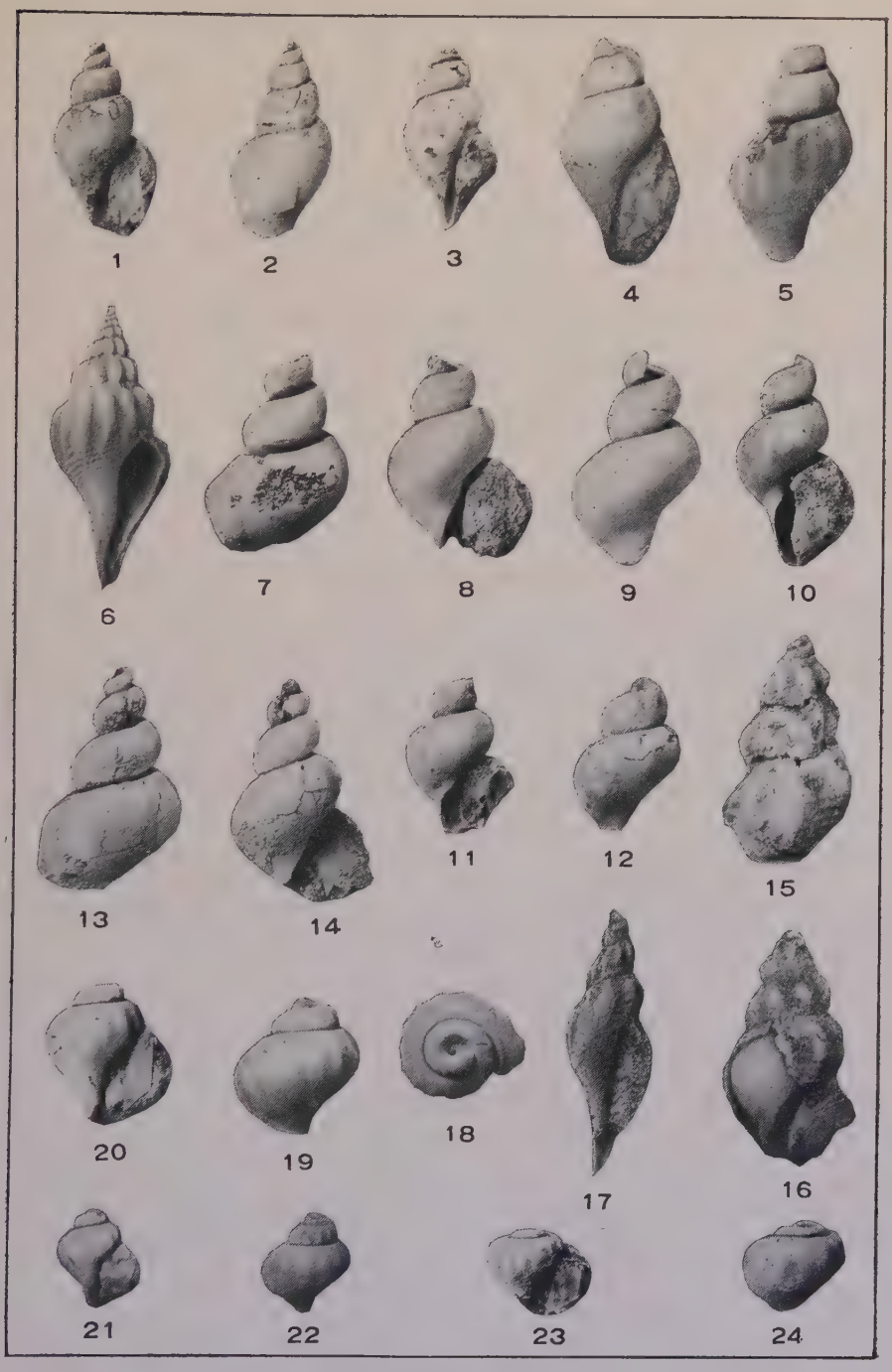
TURBINELLA INTERMEDIA n. sp., ... p. 767

18–20. Vertical and two lateral views of a large internal cast.

21–22. Two lateral views of a smaller internal cast.
Merchantville clay-marl; Lenola, (163).

TURBINELLA PARVA Gabb, ... p. 770

23–24. Two lateral views of an internal cast.
Navesink marl, near Crawfords Corner, (126[7]).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EXPLANATION OF PLATE XCI.

TURBINELLA ALABAMENSIS (Gabb), ... p. 768

1–2. Lateral and vertical views of the type of *T. verticalis* Whitf.
Navesink marl; Upper Freehold.

3. Lateral view of an internal cast preserving the anterior canal.
Navesink marl; Atlantic Highlands (108).

4–5. Vertical and lateral views of a plaster cast from a natural mould of the exterior.

6. Internal cast of the same individual.
Wenonah sand; near Crawfords Corner, (126[3]).

CARICELLA PLICATA Whitfield, ... p. 772

7–8. Two lateral views of the type specimen.
Manasquan marl, Farmingdale.

VASUM CONOIDES Whitfield, ... p. 773

9–10. Two lateral views of the type specimen.
Navesink marl; Walnford.

TURBINELLA SUBCONICA Gabb, ... p. 771

11–12. Two lateral views of the type specimen.
Navesink marl; Monmouth County.

VOLUTODERMA BIPLICATA (Gabb), ... p. 775

13–14. Two lateral views of a large internal cast.
Wenonah sand; near Crawfords Corner, (126[3]).

15–16. Two lateral views of a small internal cast.

17. Lateral view of a large, imperfect internal cast.
Merchantville clay-marl; Lenola, (163).

VOLUTODERMA WOOLMANI Whitfield, ... p. 774

18–19. Lateral views of two fragmentary internal casts.
Merchantville clay-marl; Lenola, (163).

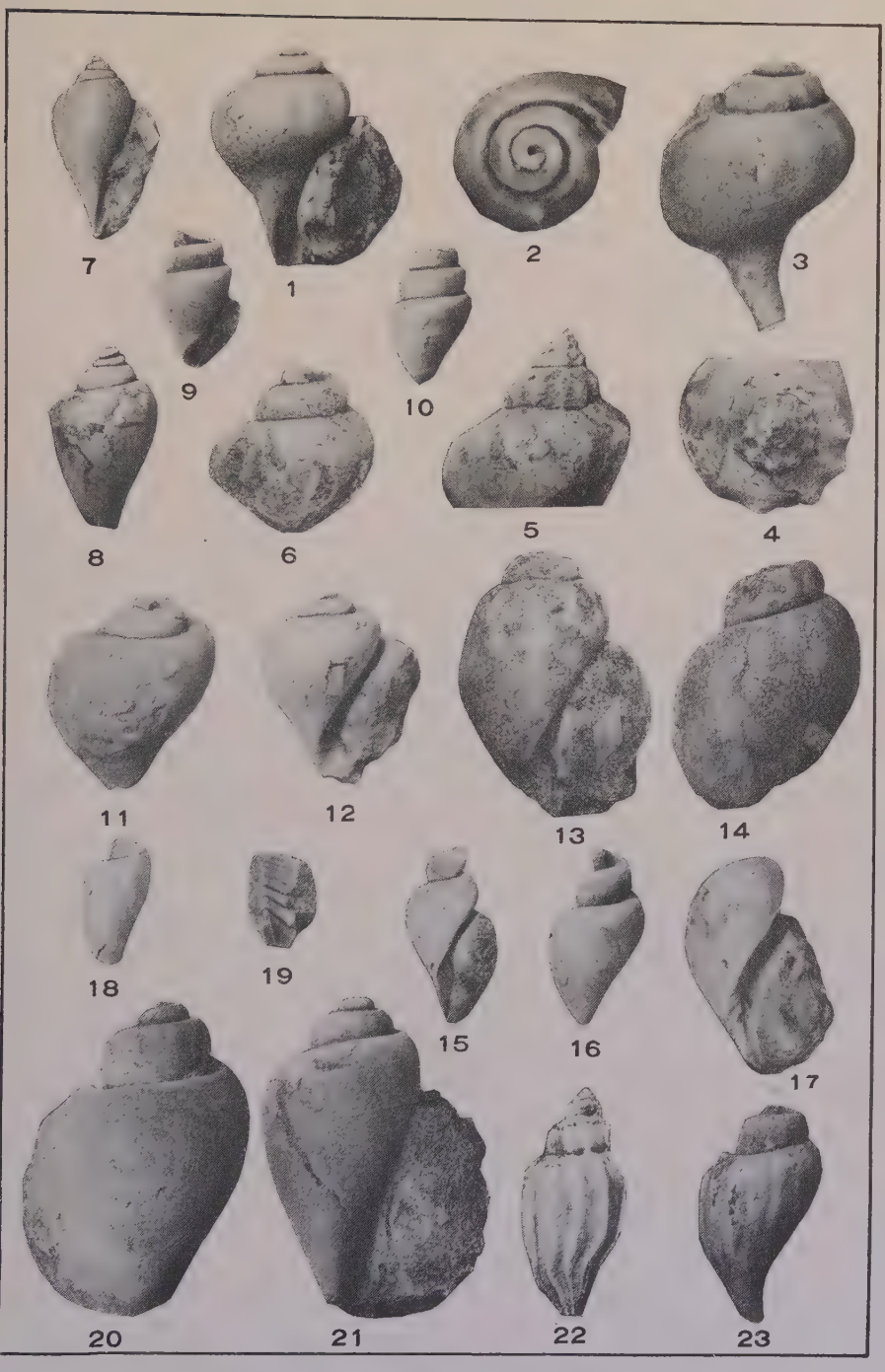
VOLUTODERMA OVATA Whitfield, ... p. 776

20–21. Two lateral views of a large internal cast.
Navesink marl; Atlantic Highlands (108).

VOLUTODERMA JAMESBURGENSIS n. sp., ... p. 777

22. Lateral view of a squeeze from a natural mould.

23. Lateral view of the internal cast of the same individual.
Merchantville clay-marl; near Jamesburg, (140).



GASTROPODA.

EXPLANATION OF PLATE XCII.

VOLUTODERMA ABBOTTI (Gabb),.....p. 778

1–2. Two lateral views of the type specimen.

Horizon and locality uncertain.

VOLUTODERMA INTERMEDIA Whitfield,.....p. 779

3. Lateral view of the type specimen.

Manasquan marl; near Vincentown.

PIESTOCHILUS BELLA Gabb ?,.....p. 782

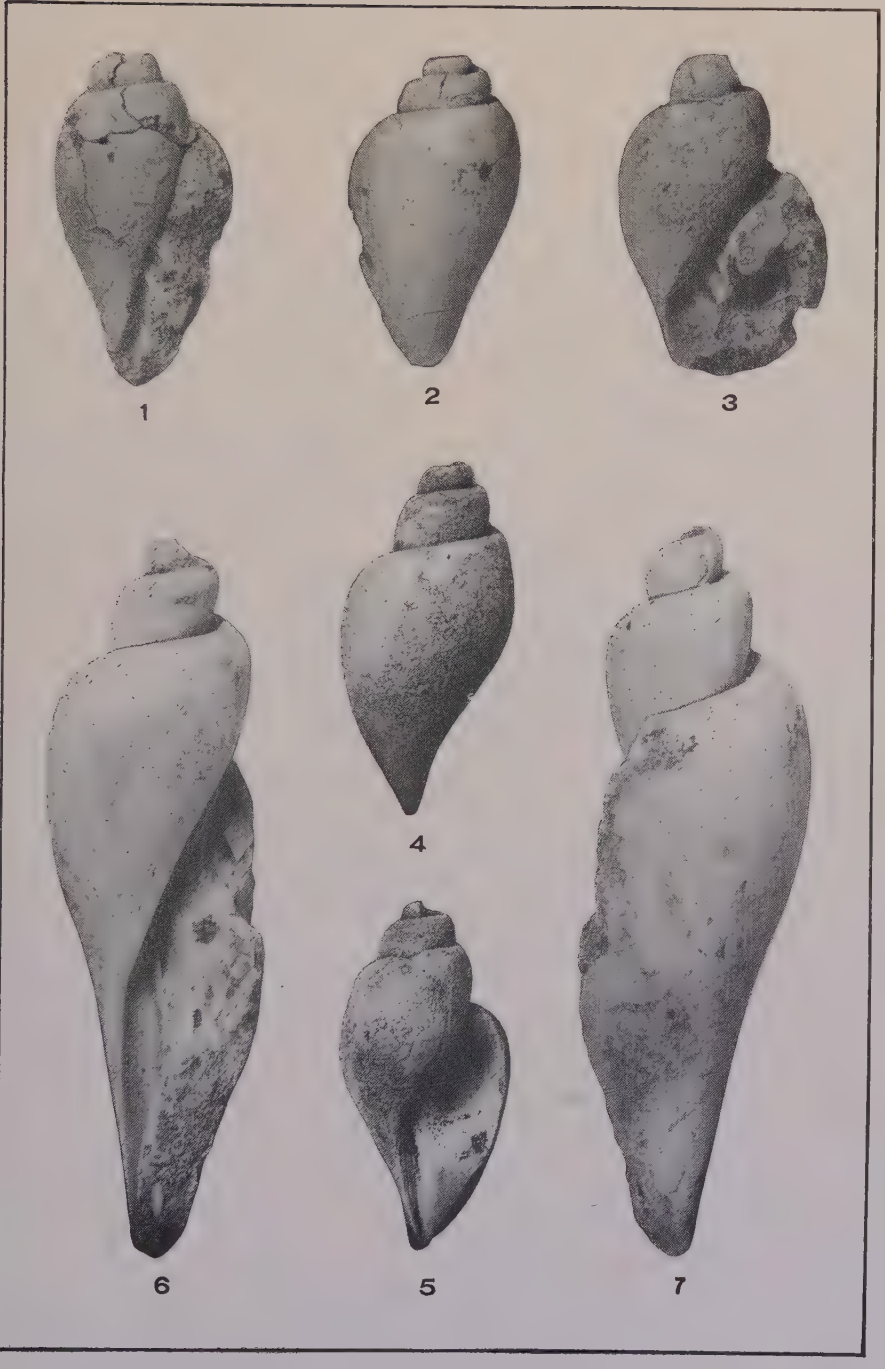
4–5. Two lateral views of an internal cast, partially restored.

Wenonah sand; Crawfords Corner, (126[3]).

VOLUTOMORPHA CONRADI (Gabb),.....p. 780

6–7. Two lateral views of the type specimen.

Navesink marl; Crosswicks Creek.



GASTROPODA.

EXPLANATION OF PLATE XCIII.

VOLUTOMORPHA CONRADI (Gabb).....p. 780

1–2. Two lateral views of a large internal cast.

Navesink marl; near Holmdel.

3. Lateral view of a cast retaining some of the surface markings.

Navesink marl.

VOLUTOMORPHA sp.,

4–5. Two lateral views of an internal cast.

Wenonah sand; near Crawfords Corner, (*126*[3]).

GASTROPODA.

EXPLANATION OF PLATE XCIV.

VOLUTOMORPHA CONRADI (Gabb), ... p. 780

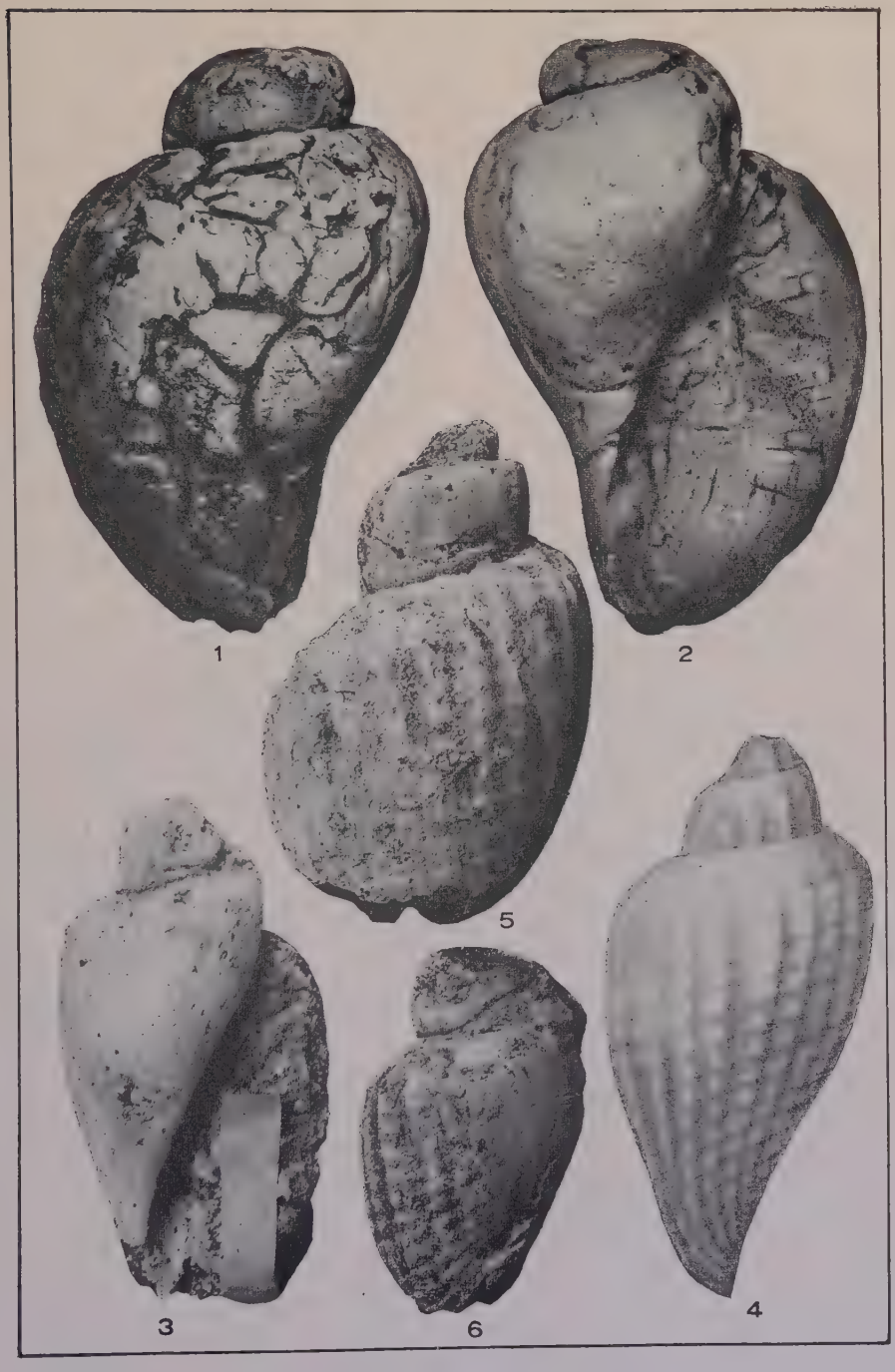
1–2. Two lateral views of a very broad internal cast.
Cliffwood clay; Cliffwood Point, (105).

3. Lateral view of one of the type specimens of *V. gabbi* Whift.
Navesink marl; Mullica Hill.

4. Lateral view of one of the type specimens of *V. gabbi.* (After Whitfield.)
Navesink marl, Holmdel.

5. Lateral view of an internal cast preserving some of the surface markings.
Navesink marl; Mullica Hill (169).

6. Lateral view of a small internal cast illustrated by Whitfield as *V. gabbi.*
Navesink marl; Marlboro.



GASTROPODA.

EXPLANATION OF PLATE XCV.

VOLUTOMORPHA PONDEROSA Whitfield.....p. 781

1–2. Two lateral views of one of the type specimens.

Navesink marl; Navesink Hills.

PIESTOCHILUS sp.

3–4. Two lateral views of an internal cast.

Navesink marl; Mullica Hill, (169).

ODONTOFUSUS MUCRONATA Gabb.....p. 764

5–6. Two lateral views of an internal cast.

Navesink marl; Middleton, (113).

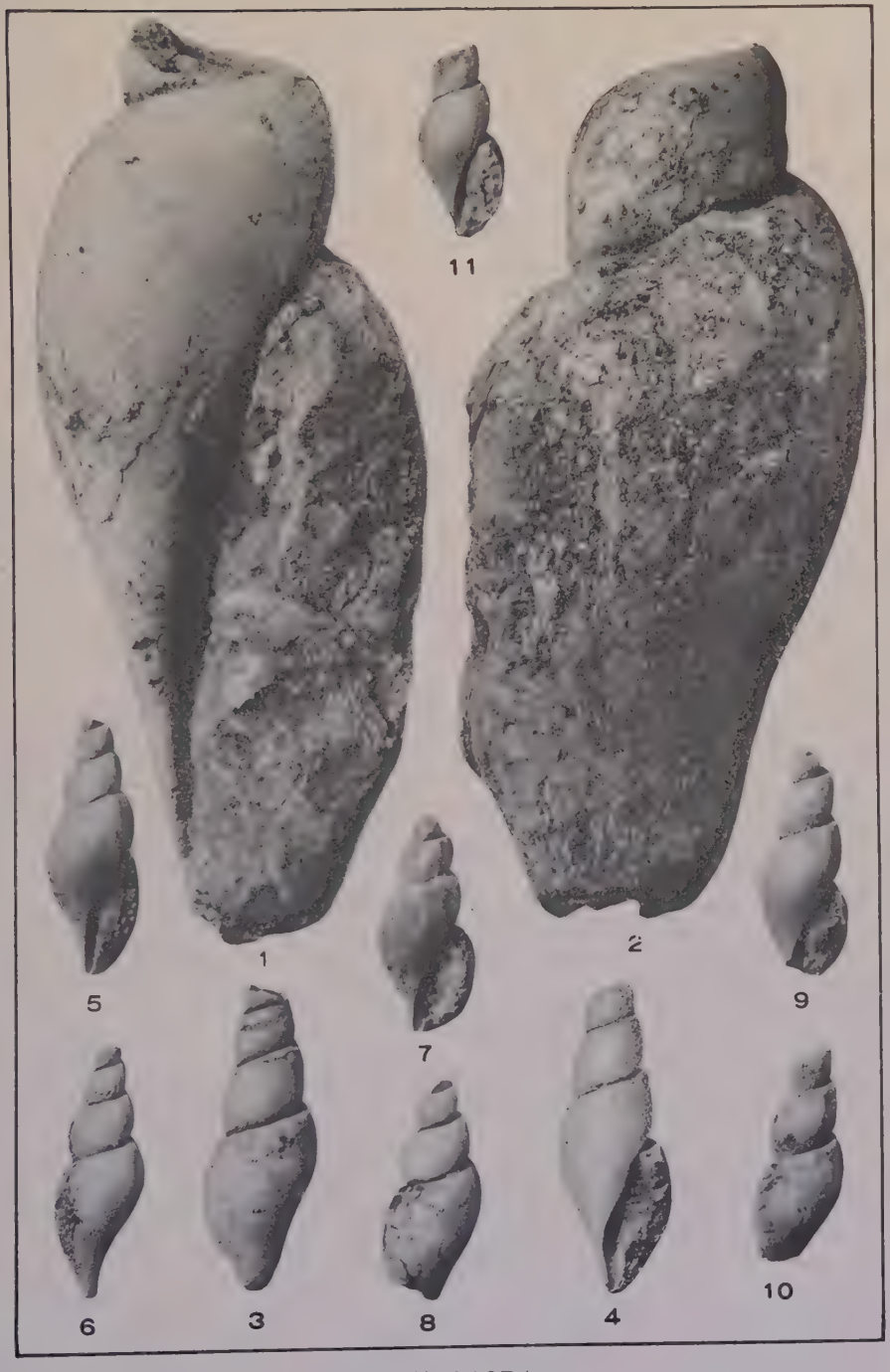
7–8. Two lateral views of the type specimen of *O. rostellaroides* Whitf.

Navesink marl; Holmdel.

9–10. Two lateral views of an internal cast.

11. Lateral view of an internal cast.

Navesink marl; near Crawfords Corner, (126').



GASTROPODA.

EXPLANATION OF PLATE XCVI.

PIESTOCHILUS BELLA (Gabb),.....p. 782

1–2. Two lateral views of an internal cast.

3–4. Two lateral views of a large internal cast, probably the type of the species.

Navesink marl; Monmouth County.

PIESTOCHILUS KANEI Gabb,.....p. 784

5–6. Two lateral views of an internal cast.

Wenonah sand; near Crawfords Corner, (126[3]).

7. Lateral view of an internal cast doubtfully referred to this species.

Cliffwood clay; Cliffwood Point, (185).

8–9. Two lateral views of the type of the species.

Navesink marl; Crosswicks Creek.

VOLUTOMORPHA ? sp.

10–11. Lateral views of two internal casts.

Wenonah sand; near Crawfords Corner, (126[3]).

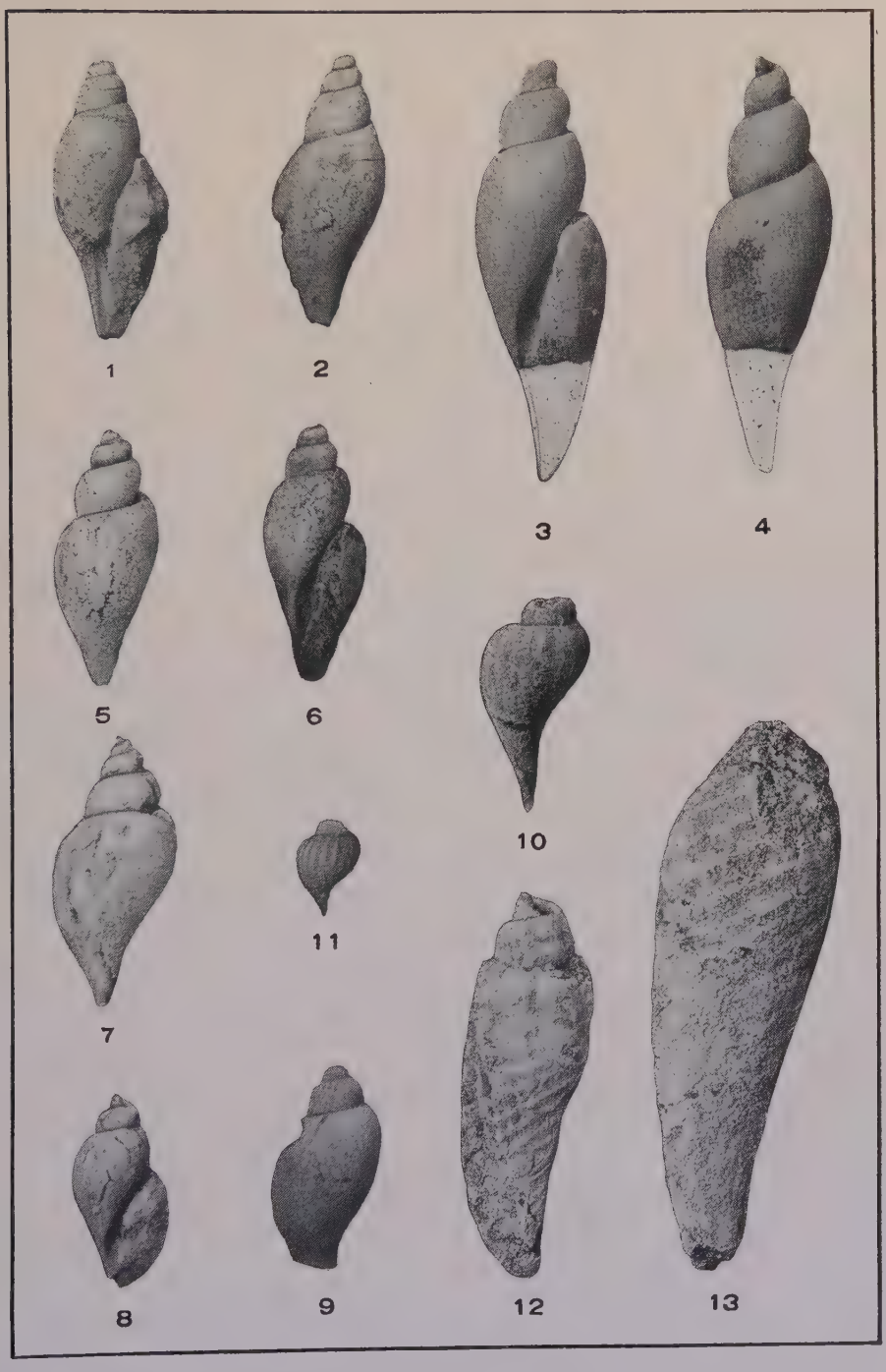
ROSTELLITES TEXTURATUS Whitfield,.....p. 785

12. Lateral view of an imperfect internal cast.

Merchantville clay-marl; Lenola, (163).

13. Lateral view of an internal cast illustrated by Whitfield.

Navesink marl; Holmdel.



GASTROPODA.

EXPLANATION OF PLATE XCVII.

ROSTELLITES NASUTUS Gabb, ... p. 786

1–2. Two lateral views of the type specimens.

Navesink marl; Monmouth County.

ROSTELLITES ANGULATUS Whitfield, ... p. 787

3–4. Two lateral views of the type specimen.

Navesink marl.

ROSTELLITES BICONICUS Whitfield, ... p. 788

5–6. Two lateral views of an internal cast.

7–8. Lateral views of two imperfect casts.

Manasquan marl; Farmingdale.

TURRICULA LEDA Whitfield, ... p. 790

9. View of the type specimen.

Navesink marl; Freehold.

TURRICULA REILEYI Whitfield, ... p. 791

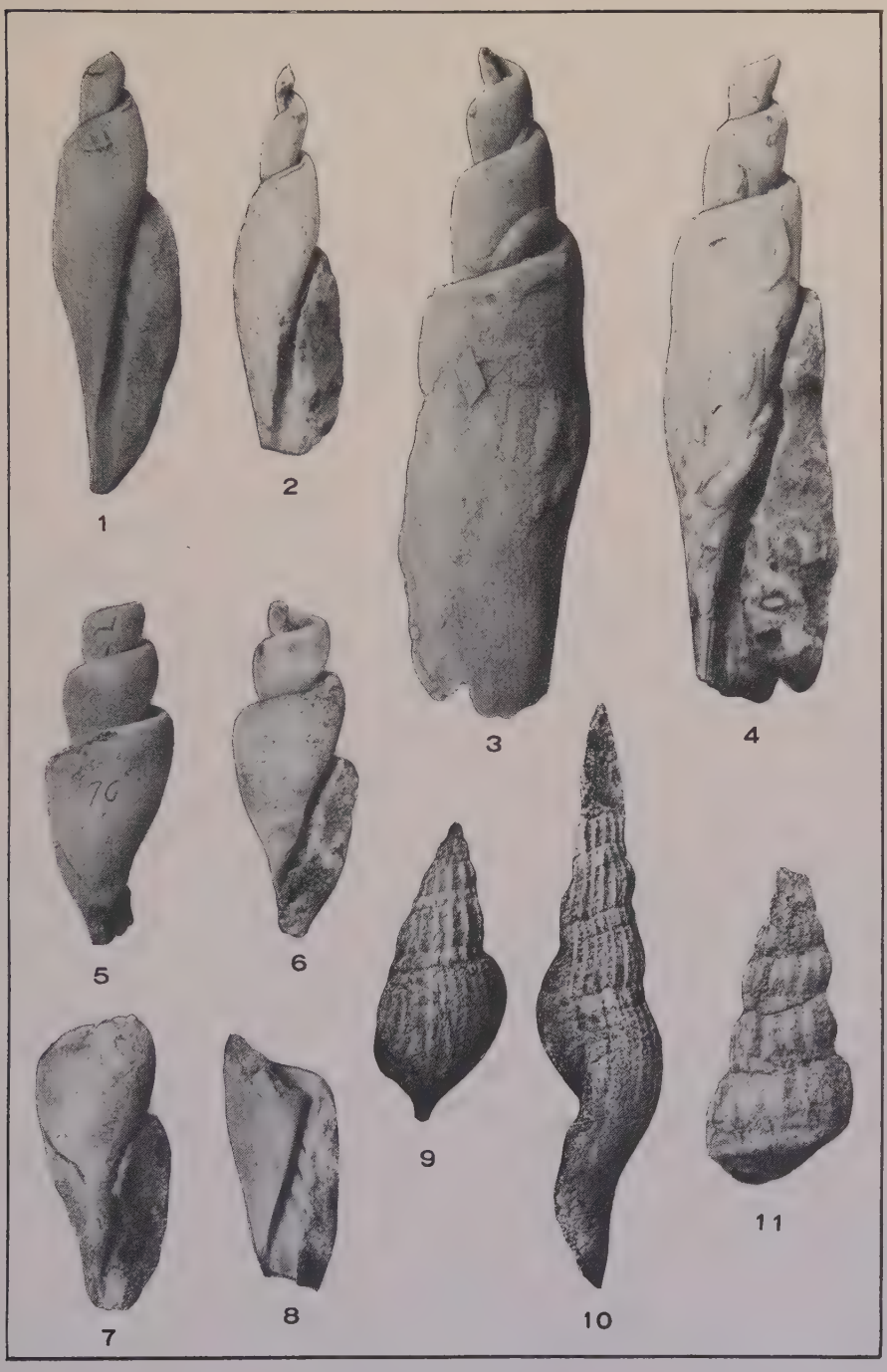
10. View of the type specimen.

Navesink marl; Freehold.

TURRICULA SCALARIFORMIS Whitfield, ... p. 789

11. View of the type specimen.

Navesink marl; Holmdel.



GASTROPODA.

EXPLANATION OF PLATE XCVIII.

CANCELLARIA SUBALTA Conrad, ... p. 792

1. Lateral view of an internal cast.
Woodbury clay; Lorillard, (102).

CANCELLARIA SMOCKI n. sp., ... p. 793

2–3. Lateral views of two internal casts.
Woodbury clay; Lorillard, (102).

TURBINOPSIS ? CURTA Whitfield, ... p. 798

4–5. Two lateral views of an internal cast.
Navesink marl; near Walnford, (149).

TURBINOPSIS DEPRESSA Gabb, ... p. 794

6–8. Lateral, vertical and basal views of an internal cast.
Navesink marl; near Walnford, (148[4]).

9. Lateral view of an internal cast showing some of the external markings.

10–11. Lateral and vertical views of an internal cast showing anterior extension of shell.
Wenonah sand; near Crawfords Corner, (126[8]).

TURBINOPSIS ANGULATA Whitfield, ... p. 796

12–13. Two lateral views of the type specimen.
Navesink marl; Crosswicks.

MOREA NATICELLA Gabb, ... p. 800

14–15. Two lateral views of an internal cast, retaining some of the markings of the exterior.
Merchantville clay-marl; Lenola, (163).

MOREA PLICATA (Whitfield), ... p. 801

16–17. Two lateral views of the type specimen.
Navesink marl; Crosswicks.

PLEUROTOMA FARMINGDALENSIS Whitfield, ... p. 802

18–19. Two lateral views of the type specimen.
Manasquan marl; Farmingdale.

CITHARA CROSSWICKENSIS Whitfield, ... p. 803

20–21. Two lateral views of the type specimen.
Navesink marl; Crosswicks Creek.

CITHARA MULLICAENSIS Whitfield, ... p. 804

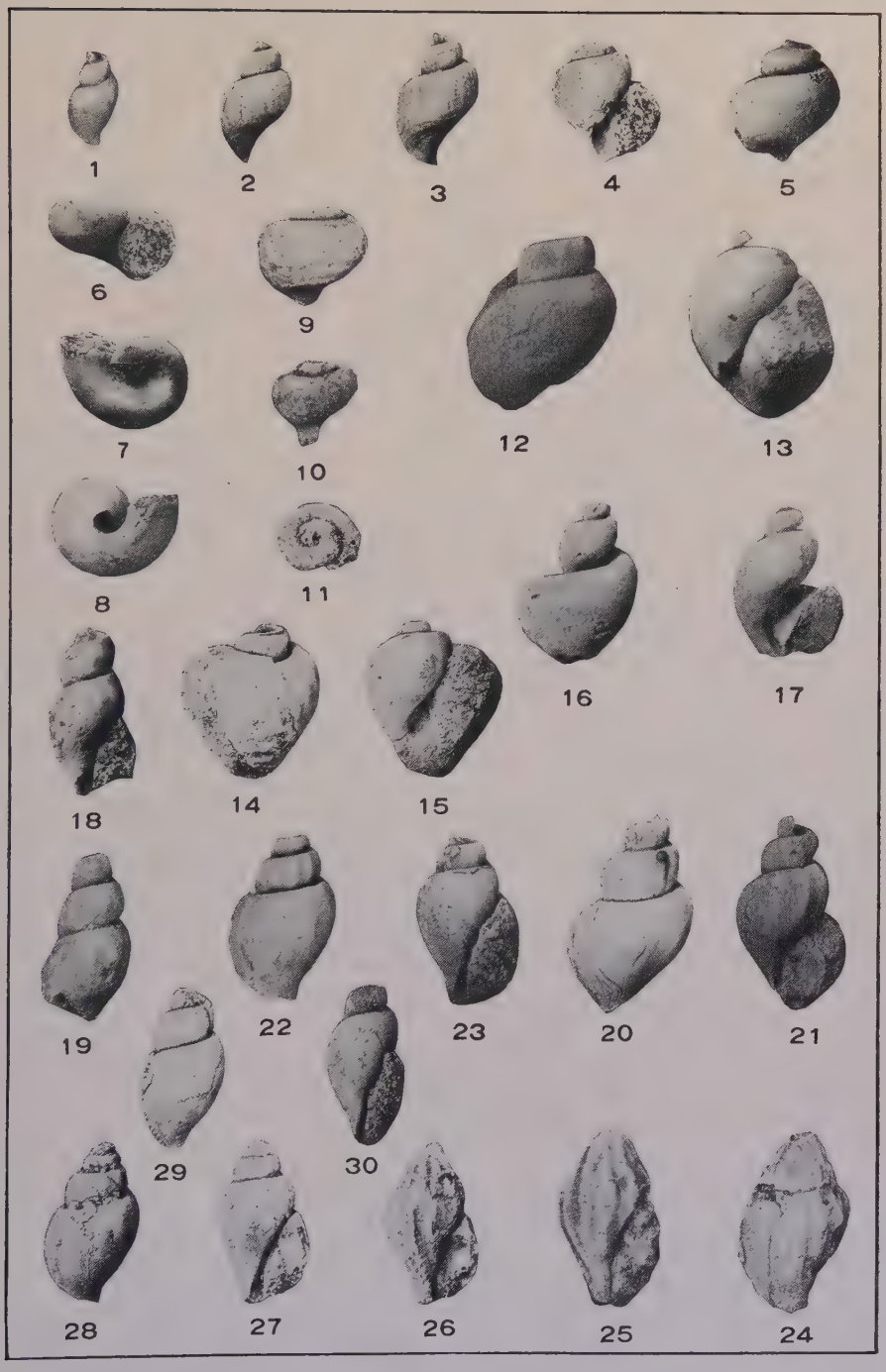
22–25. Two lateral views each of two specimens, one an internal cast, and one partially preserving the shell.
Navesink marl; Mullica Hill, (169).

26. Lateral view of one of the type specimens partially preserving the shell.

27–28. Two lateral views of another of the type specimens.
Navesink marl; Freehold.

CITHARA sp.

29–30. Two lateral views of an internal cast.
Navesink marl; near Crawfords Corner, (126[7]).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GASTROPODA.

EXPLANATION OF PLATE XCIX.

ACTAEON CRETACEA Gabb, ... p. 805

1–2. Two lateral views of a very large internal cast.
Navesink marl; Atlantic Highlands, (108).

3–6. Two lateral views each of two internal casts.
Wenonah sand; near Crawfords Corner, (126[2]).

ACTAEON GABBANA Whitfield, ... p. 807

7–8. Two lateral views of a large internal cast.
Woodbury clay; near Matawan, (103).

AVELLANA BULLATA (Morton), ... p. 808

9–10. Two lateral views of one of the specimens used by Morton in his description of the species.
Navesink marl.

11. Lateral view of a distorted internal cast.
Merchantville clay-marl; Lenola, (163).

CINULIA NATICOIDES (Gabb), ... p. 811

12–13. Two lateral views of an internal cast.
Navesink marl; near Freehold, (133).

HAMINEA MORTONI (Forbes), ... p. 812

14–15. Two lateral views of an internal cast.
Navesink marl; Atlantic Highlands, (108).

16. Lateral view of a shorter internal cast.
Navesink marl; near Crawfords Corner, (126[7]).

CYLICHNA RECTA Gabb, ... p. 814

17. Lateral view of an internal cast, (x2).
Navesink marl; near Freehold, (133).

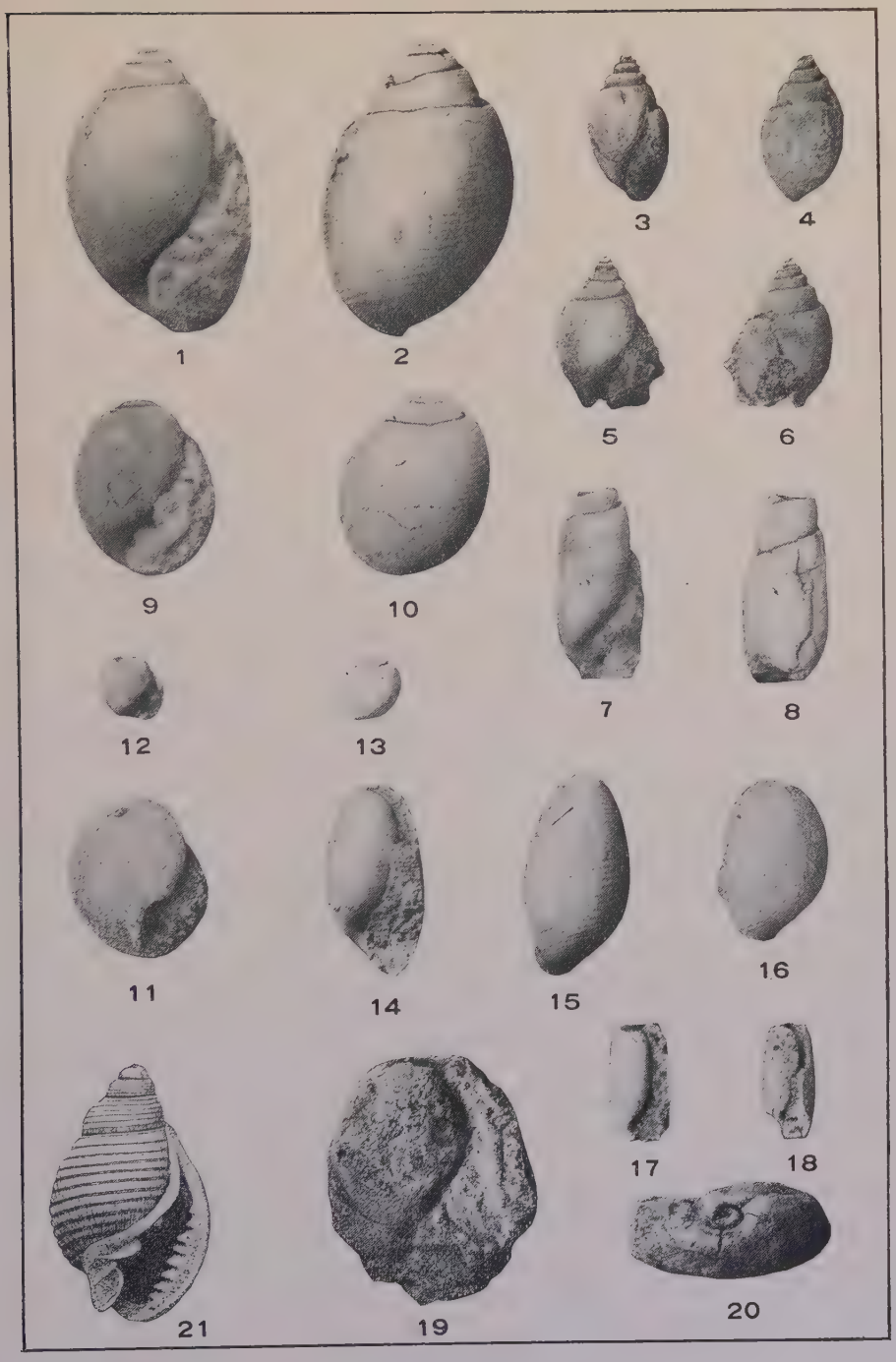
18. Lateral view of an internal cast, (x2).
Wenonah sand; near Crawfords Corner, (126[3]).

BULLA MACROSTOMA Gabb, ... p. 812

19–20. Lateral and vertical views of a crushed internal cast.
Red Bank sand; near Middletown, (112).

AVELLANA COSTATA (Johnson), ... p. 810

21. Lateral view of the type specimen (x8½). (After Johnson.)
Woodbury clay ?; Artesian well at Mount Laurel.



GASTROPODA.

EXPLANATION OF PLATE C.

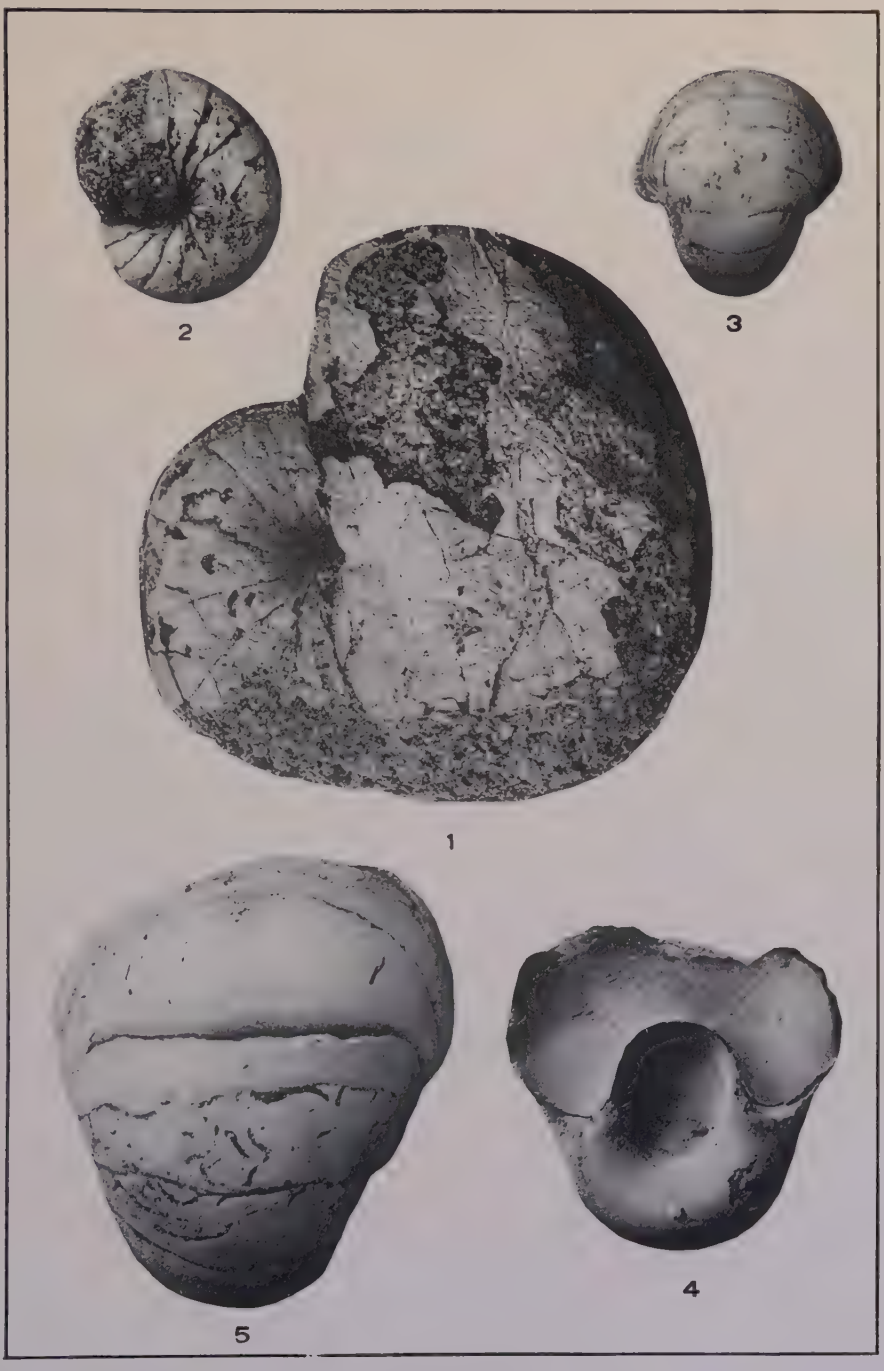
NAUTILUS DEKAYI Morton, ... p. 817

1. Lateral view of an incomplete internal cast.
   Red Bank sand; Shrewsbury River, (119).

2–3. Lateral and dorsal views of a small internal cast, illustrated by Whitfield.

4. Ventral view of a fragmentary internal cast, illustrated by Whitfield.
   Navesink marl; Marlboro.

5. Dorsal view of a fragmentary internal cast illustrated by Whitfield.
   Hornerstown marl; Cook's pits near Tinton Falls.



GASTROPODA.

EXPLANATION OF PLATE CI.

NAUTILUS BRYANI Gabb, ... p. 818

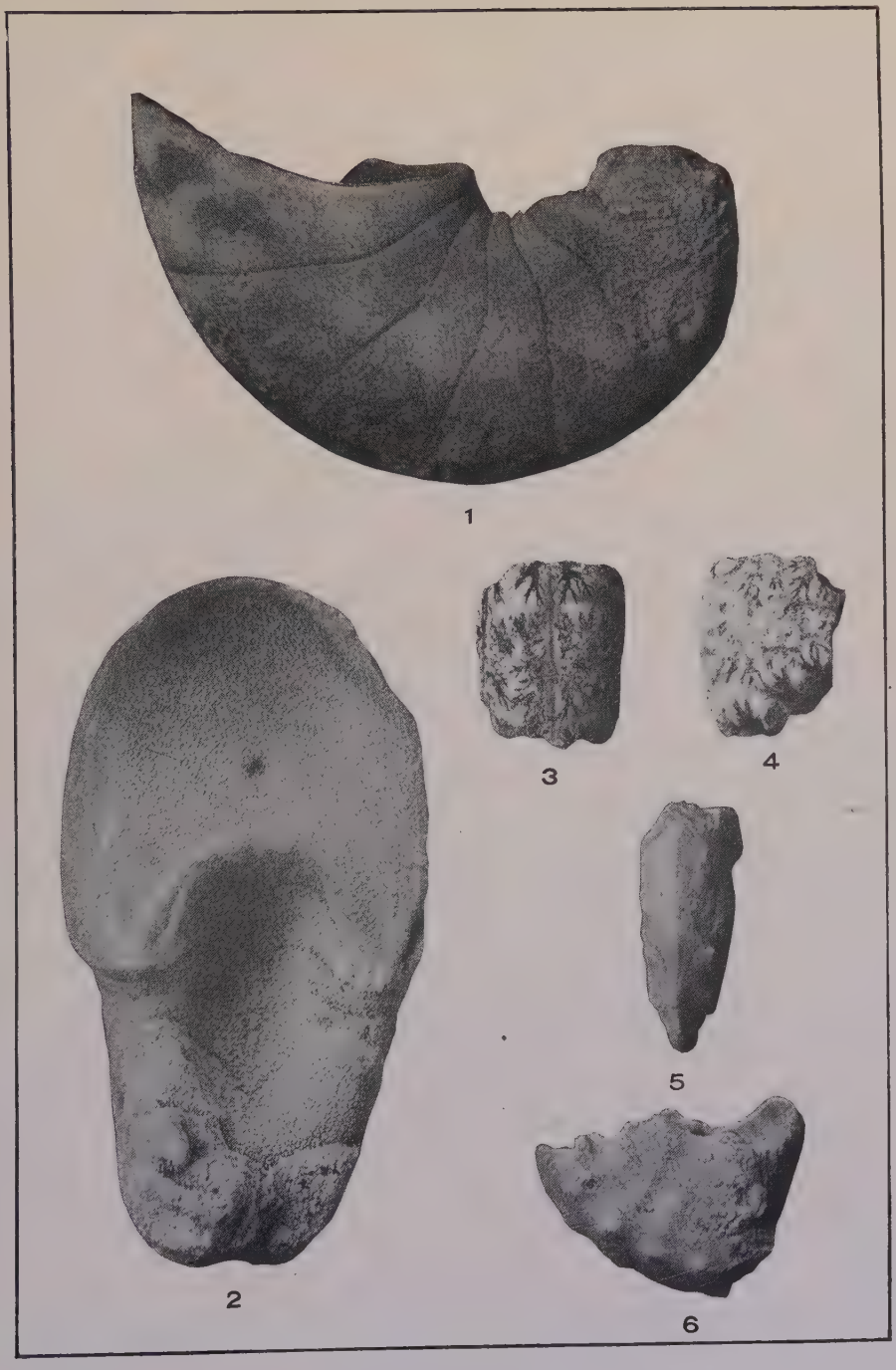
1–2. Lateral and ventral views of the type specimen.
Vincentown limesand; Vincentown.

PACHYDISCUS COMPLEXUS (Hall and Meek)?..... p. 819

3–4. Dorsal and lateral views of a fragment of an internal cast illustrated by Whitfield.
Locality unknown.

BARROISICERAS DENTATO-CARINATUS (Roemer), ... p. 836

5–6. Dorsal and lateral views of a fragmentary internal cast illustrated by Whitfield.
Locality unknown.



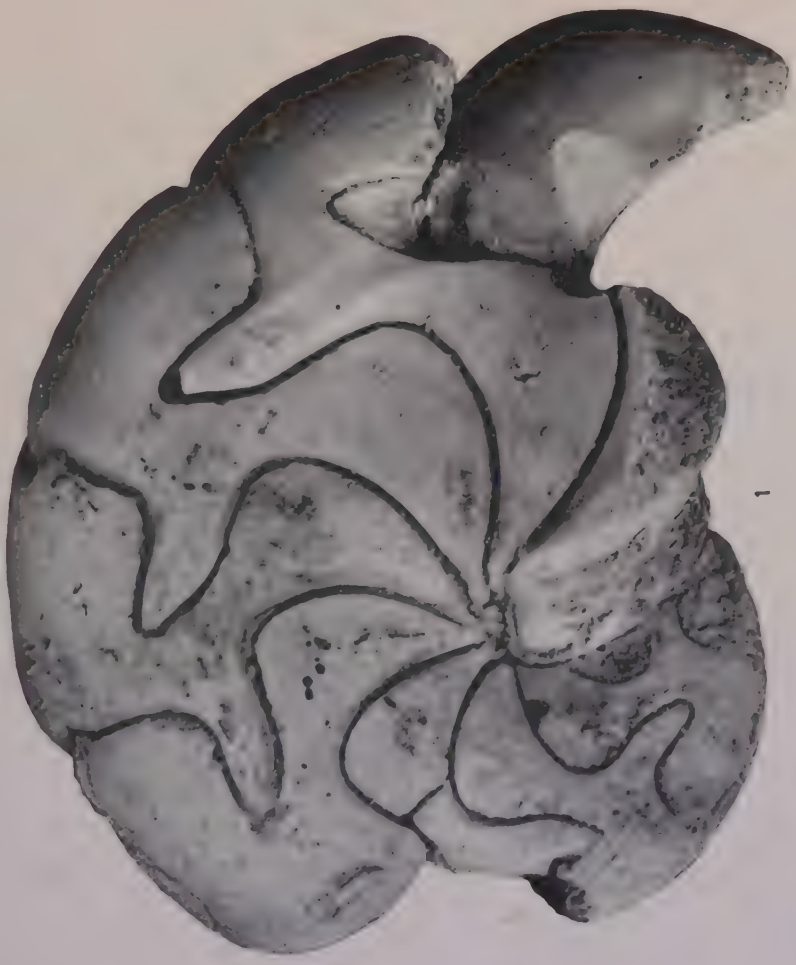
CEPHALOPODA.

EXPLANATION OF PLATE CII.

HERCOGLOSSA PAUCIFEX (Cope), ... p. 815

1. Lateral view of the type specimen, (x½+).

Hornerstown marl; Glassboro.



CEPHALOPODA.

EXPLANATION OF PLATE CIII.

MORTONICERAS DELAWARENSIS (Morton), ... p. 837

1. Lateral view of a nearly perfect internal cast.

Merchantville clay-marl.

1

CEPHALOPODA.

EXPLANATION OF PLATE CIV.

MORTONICERAS DELAWARENSIS (Morton), ... p. 837

1–3. Lateral, ventral and dorsal views of an incomplete internal cast.

Merchantville clay-marl; Lenola, (163).

4–5. Lateral and dorsal views of the type specimen.

Merchantville clay-marl.

PLACENTICERAS PLACENTA (DeKay), ... p. 830

6. Lateral view of an incomplete internal cast of an immature specimen.

Merchantville clay-marl; Lenola, (163).

PLACENTICERAS TELIFER (Morton), ... p. 832

7–8. Views of two fragments used by Morton in his description of the species.

Locality not known.

CEPHALOPODA.

EXPLANATION OF PLATE CV.

PLACENTICERAS PLACENTA (DeKay), ... p. 830

1. Lateral view of a large internal cast, (x½+).

Merchantville clay-marl; Lenola, (163).

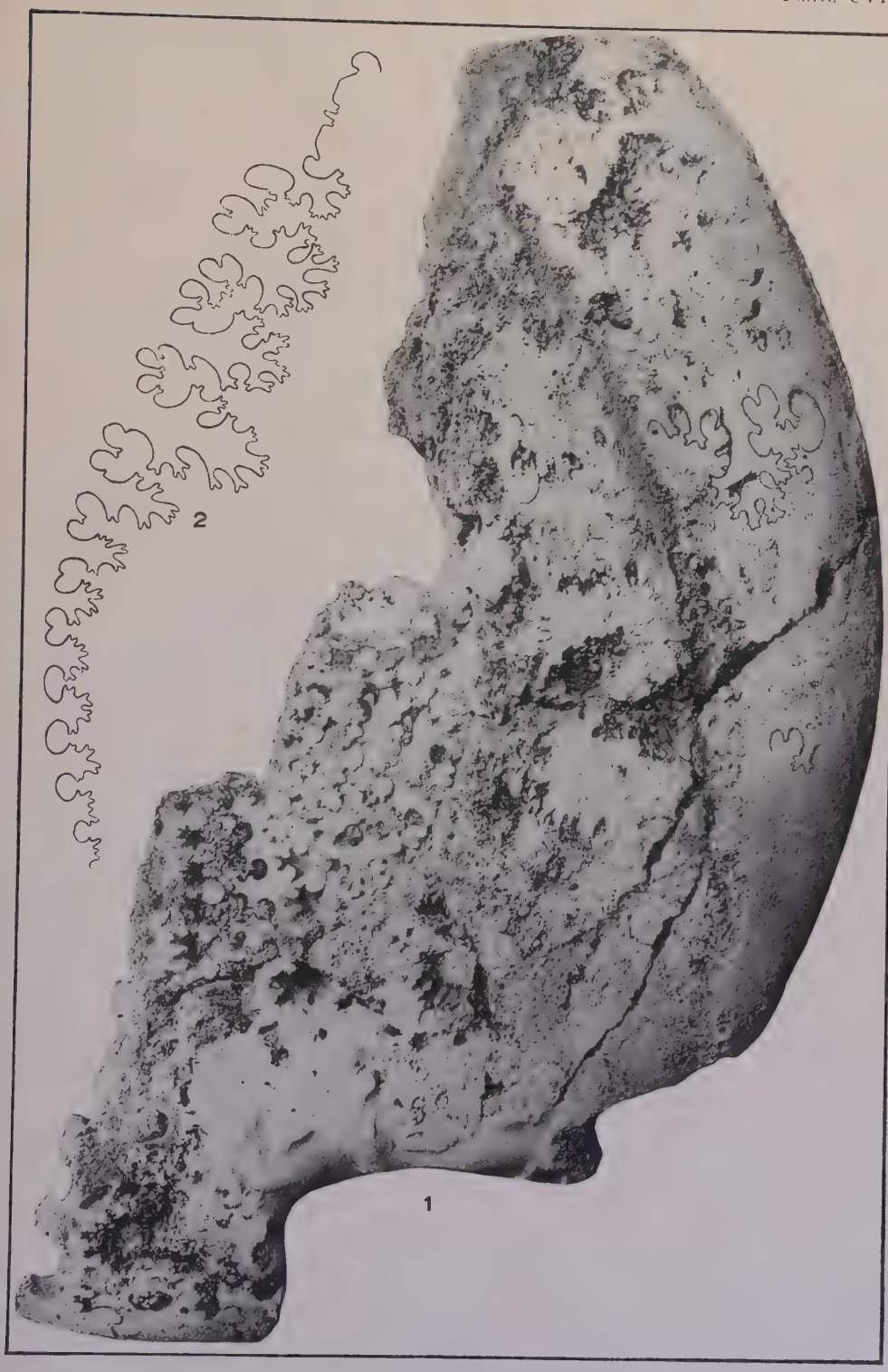
CEPHALOPODA.

EXPLANATION OF PLATE CVI.

SPHENODISCUS LOBATUS (Tuomey), ... p. 828

1. Lateral view of an incomplete internal cast.
2. The suture of the same.

Tinton beds; Tinton Falls, (110).



CEPHALOPODA.

EXPLANATION OF PLATE CVII.

SCAPHITES NODOSUS Owen ?,.....p. 824

1–2. Lateral and dorsal views of an imperfect specimen illustrated by Whitfield.

Locality not known.

SCAPHITES HIPPOCREPIS (DeKay),.....p. 826

3–5. Three views of an internal cast.

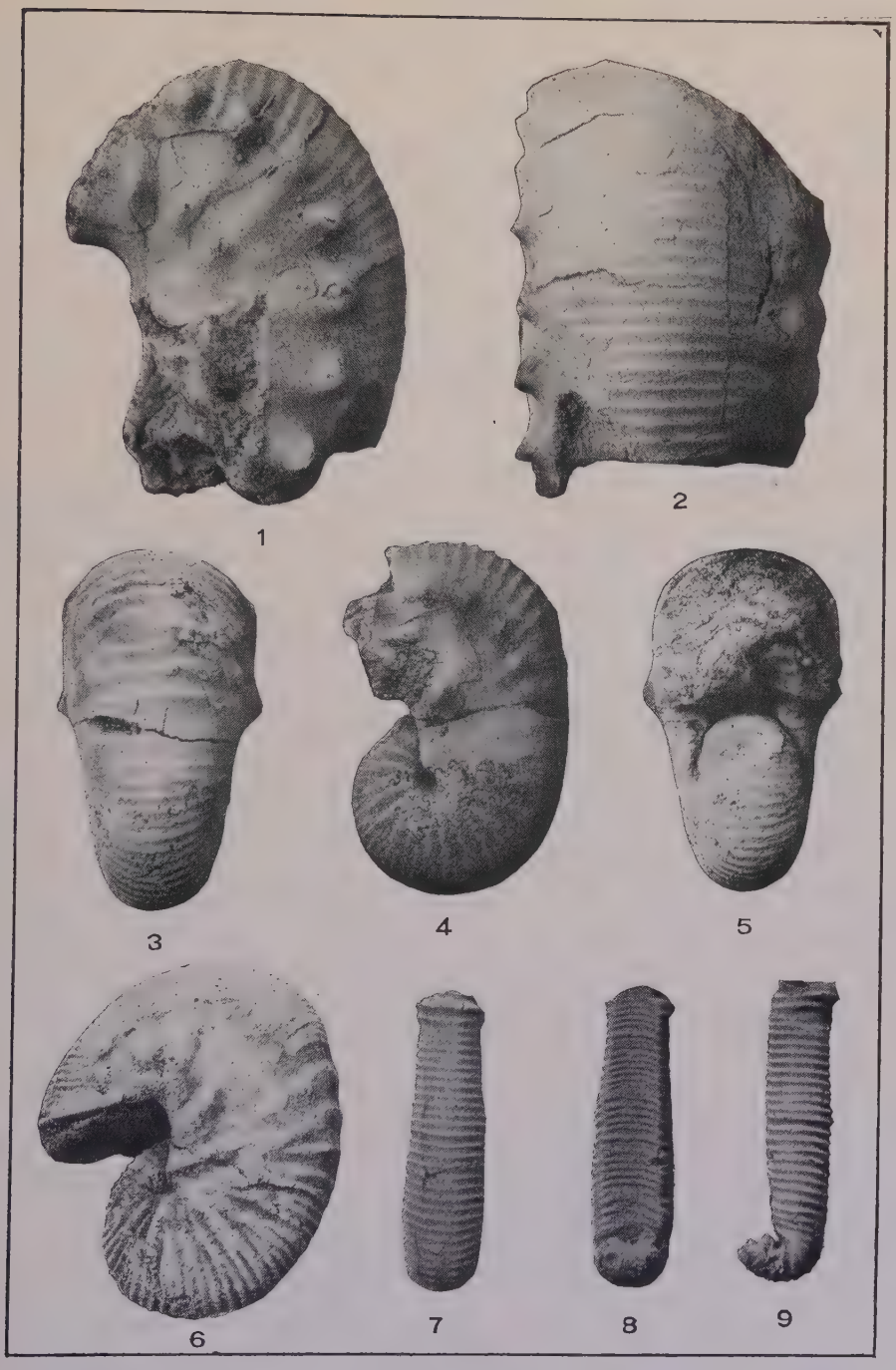
6. Lateral view of another internal cast.

Merchantville clay-marl; Lenola, (163).

PTYCHOCERAS (SOLENOCERAS) ANNULIFER Morton,

7–9. Three views of the type specimen, (x2).

Merchantville clay-marl, Delaware and Chesapeake Canal.



CEPHALOPODA.

EXPLANATION OF PLATE CVIII.

TURRILITES PAUPER Whitfield,.....p. 834

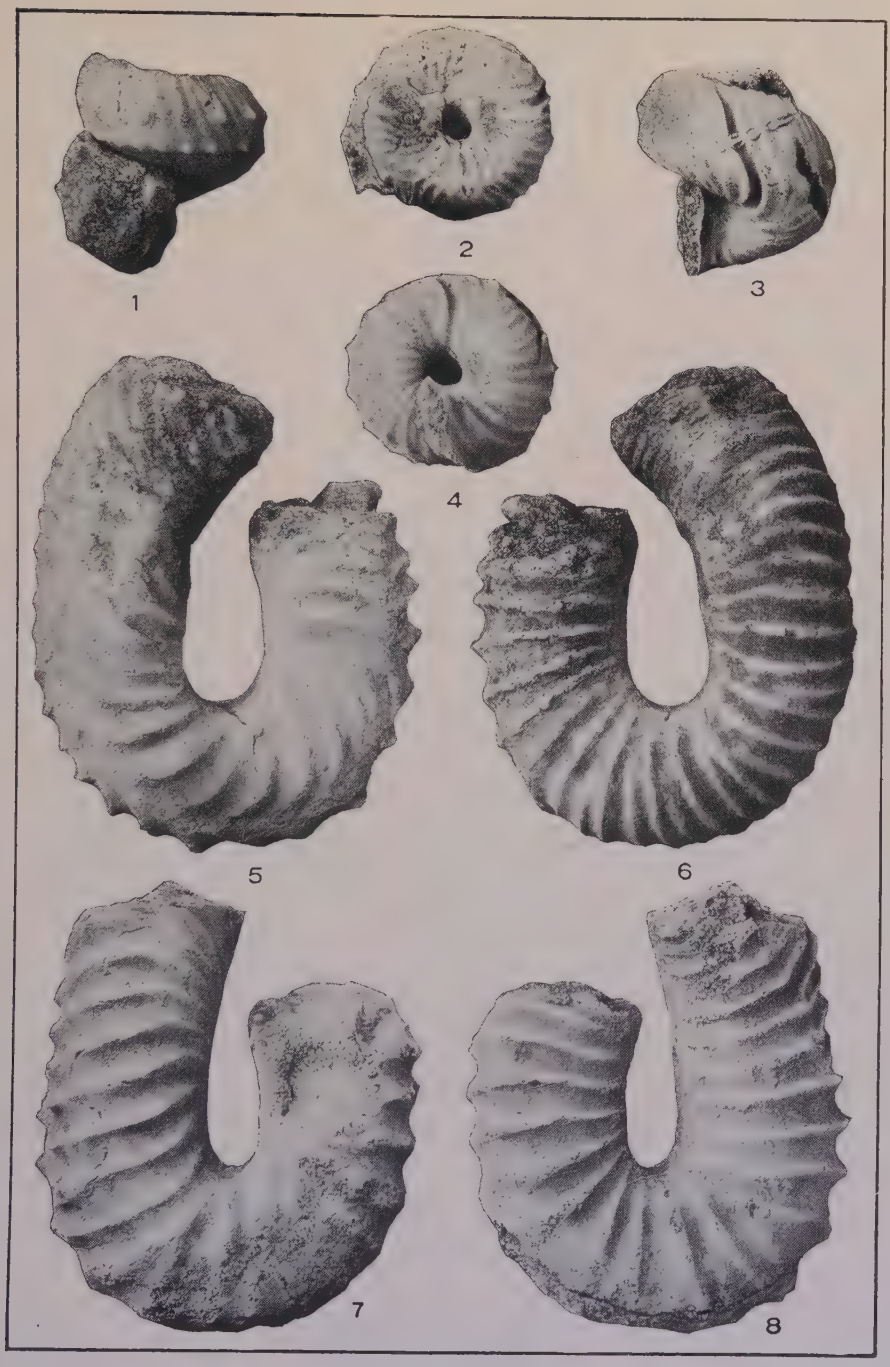
1–4. Four views of the type specimen.

Navesink marl; Navesink Hills.

HETEROCERAS CONRADI (Morton),.....p. 833

5–8. Two views each of two specimens.

Navesink marl; Atlantic Highlands, (108).



CEPHALOPODA.

EXPLANATION OF PLATE CIX.

BELEMNITELLA AMERICANA (Morton).....p. 839

1. Ventral view of a large individual showing the slit.
2. Another view of the same individual with a section removed to show the alveolar cavity.
3. View of a smaller individual preserving the mucronate extremity.

Navesink marl; Holmdel.

4. View of a cast of the alveolar cavity.

Navesink marl; Atlantic Highlands, (108).

BACULITES OVATUS Say.....p. 821

5. Lateral view of an internal cast.

Navesink marl; Atlantic Highlands, (108).

BACULITES ASPER Morton ?.....p. 823

6–7. Two views of a specimen identified and illustrated by Whitfield.

Navesink marl; Holmdel.

CEPHALOPODA.

EXPLANATION OF PLATE CX.

CYTHEREIS BASSLERI Ulrich, ... p. 843

1–3. Left lateral, anterior and ventral views of a complete carapace from the Eocene of Maryland. (After Ulrich.)

BYTHOCYPRIS PARILIS Ulrich, ... p. 844

4–5. Right lateral, and ventral views of a complete carapace from the Eocene of Maryland. (After Ulrich.)

6. Inside view of right valve. (After Ulrich.)

7. Inside view of left valve. (After Ulrich.)

CYTHERELLA SUBMARGINATA Ulrich, ... p. 845

8. A left valve showing slight mesial depression and marginal rim, from the Eocene of Maryland. (After Ulrich.)

9. Ventral view of same. (After Ulrich.)

SCALPELLUM CONRADI Gabb, ... p. 845

10. View of a scutal plate.

Vincentown limesand; near Hurffville, (170).

UNDETERMINED CRUSTACEAN,

11. Lateral view of one of the leg joints.

Merchantville clay-marl; Lenola, (163).

HOPLOPARIA GABBI Pilsbry, ... p. 846

12. Left propodite, outer face; the dactylopodite supplied from another specimen.

13. Left propodite, profile view.

14. Portions of four abdominal segments.

15. Section of anterior end of same. (All after Pilsbry.)

Merchantville clay-marl; Lenola, (163).

HOPLOPARIA GLADIATOR Pilsbry, ... p. 848

16. Propodite with dactylopodite.

17. Outline of the broken fingers of the same. (Ater Pilsbry.)

Merchantville clay-marl; Lenola, (163).

CALLIANASSA CONRADI Pilsbry, ... p. 851

18. View of a left propodite.

Tinton beds; near Freehold, (132).

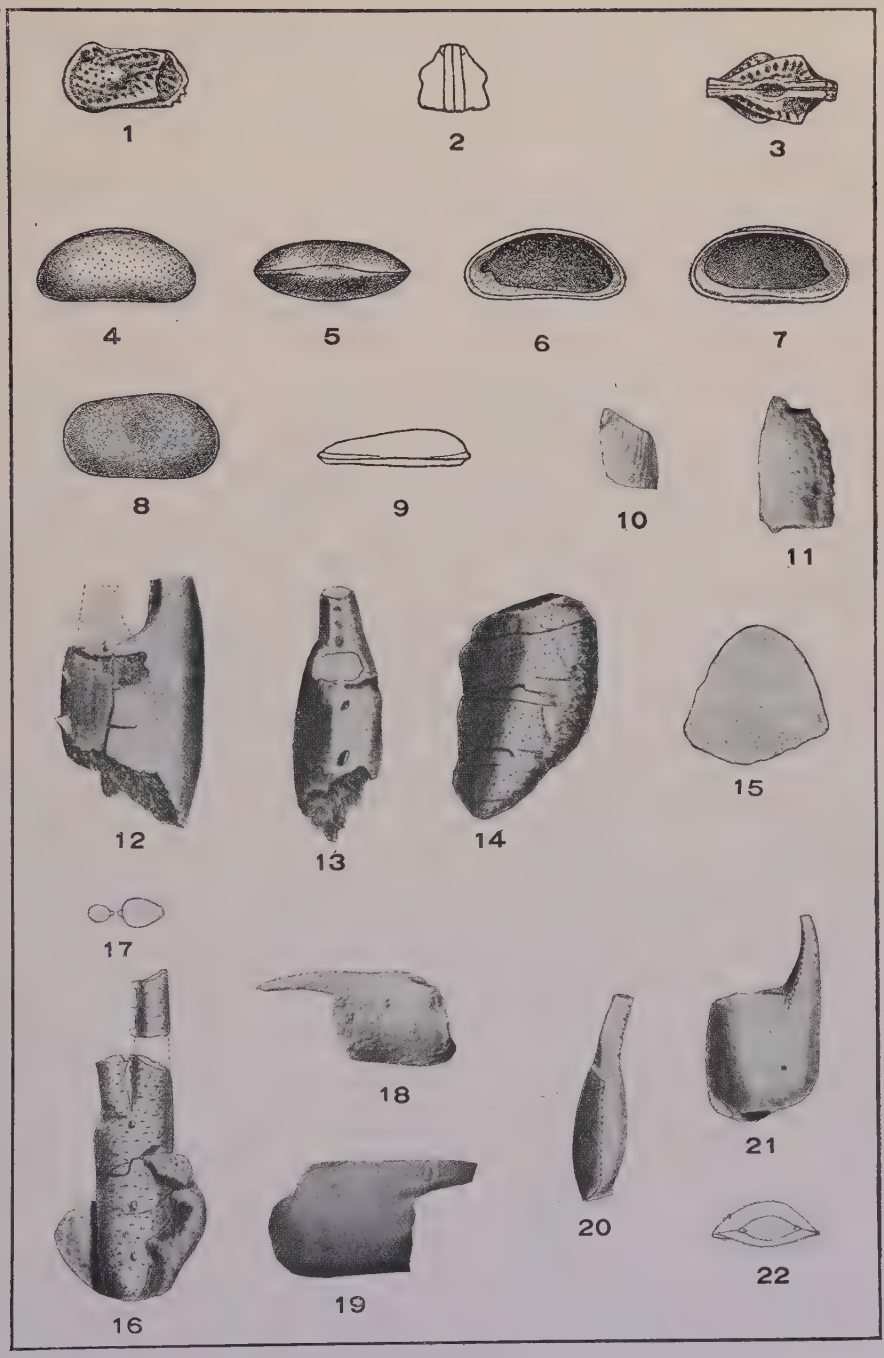
19. View of a right propodite.

Tinton beds; Beers Hill Cut, (129[9]).

20. Profile view of left propodite. (After Pilsbry.)

21. Inner face of same. (After Pilsbry.)

22. Posterior view of same. (After Pilsbry.)



CRUSTACEA.

EXPLANATION OF PLATE CXI.

CALLIANASSA MORTONI Pilsbry, ... p. 849

1–4. Inside, profile, outside, and posterior views of a right propodite. (After Pilsbry.)

5–6. Inside and outside views of a right carpopodite. (After Pilsbry.)

7. Outside view of left mesopodite. (After Pilsbry.)
Merchantville clay-marl; Lenola, (163).

8. Outside view of a left propodite retaining a portion of the dactylopodite.
Navesink marl, near Walnford (149).

9. Outside view of an incomplete, large right propodite.

10–11. Outside and inside views of a specimen retaining the propodite, carpopodite and mesopodite of the right side, in position.
Tinton beds, Beers Hill Cut, (129[5]).

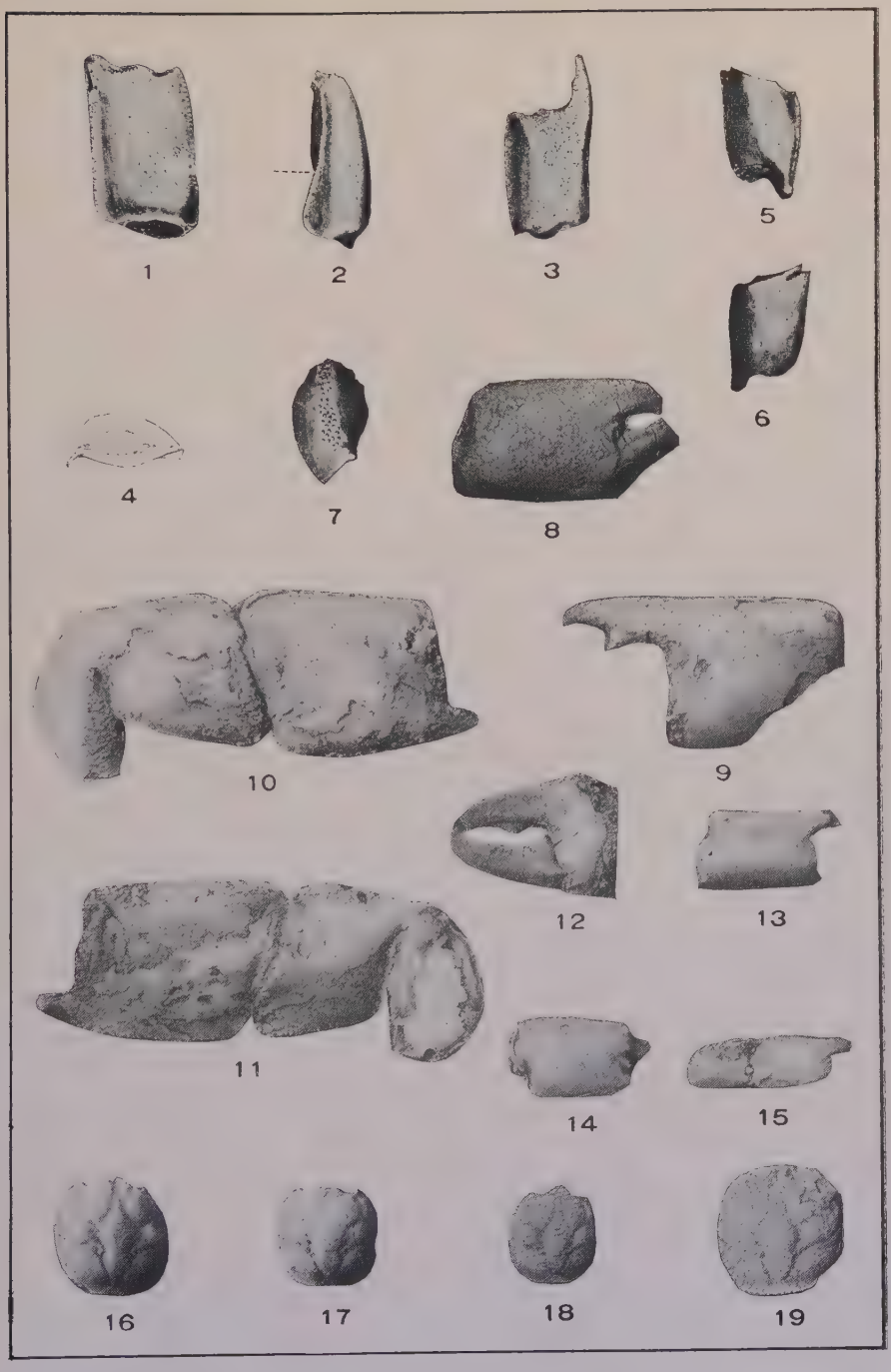
12. Outside view of the extremity of a right propodite with the dactylopodite.
Tinton beds, Beers Hill Cut, (129[5]).

13–15. Outside views of three specimens probably members of this species.
Merchantville clay-marl; Lenola, (163).

TETRACARCINUS SUBQUADRATUS Weller, ... p. 852

16–17. Dorsal views of two individuals.
Cliffwood clay; Cliffwood Point, (105).

18–19. Dorsal views of two individuals.
Woodbury clay; Lorillard, (102).



CRUSTACEA.